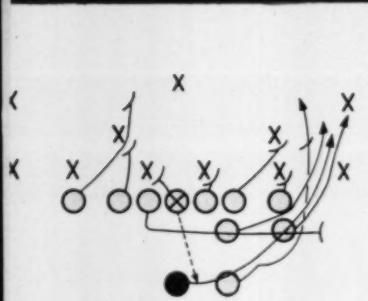
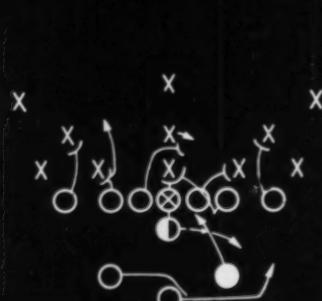


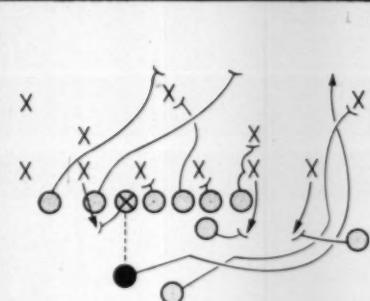
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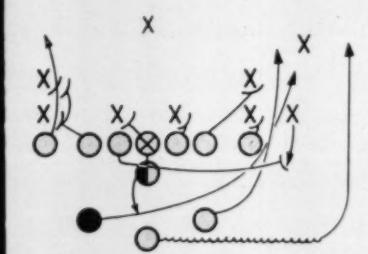
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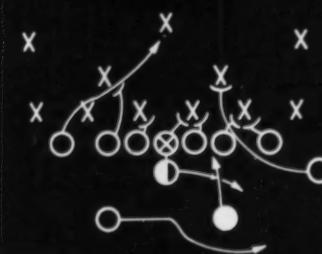
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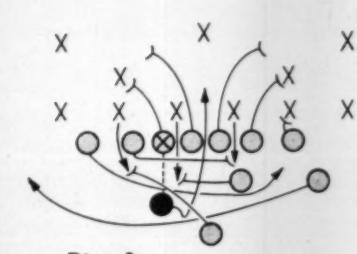
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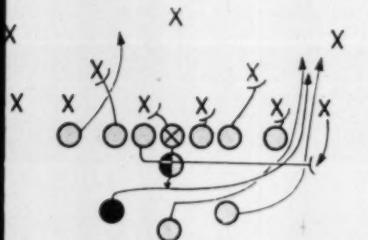
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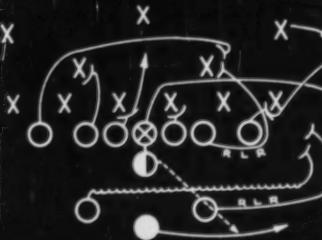
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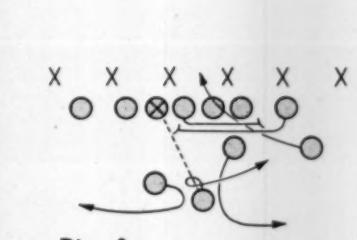
Diag. 2



Diag. 3



Diag. 3



Diag. 3

## Triple Threat T

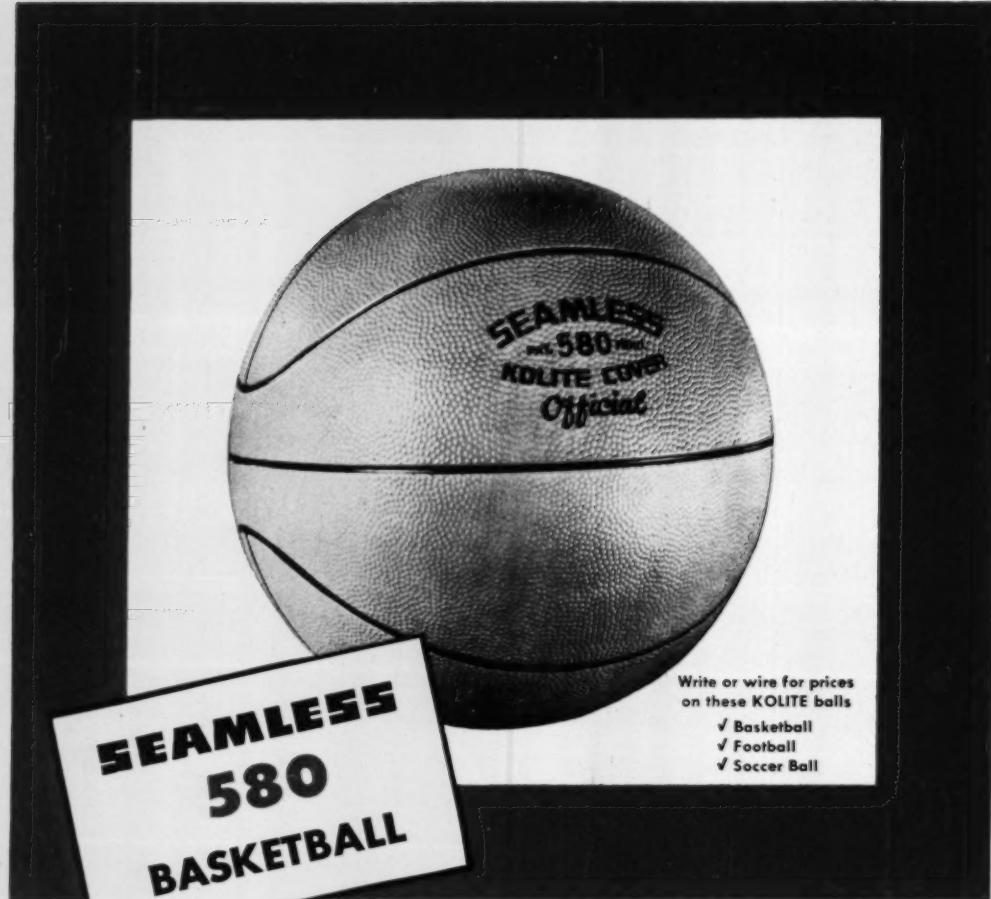
(SEE PAGE 7)

## Tommy's Elastic T

(SEE PAGE 9)

## The Swinging A

(SEE PAGE 12)



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# SCHOLASTIC COACH

Reg. U. S. Pat. Off.

VOLUME 19 • NUMBER 2 • OCTOBER

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# The Kremlin's Bitter T

**R**ECENT dispatches from Moscow report the Soviet hierarchy as claiming a certain special "Marxist superiority" for the athletes of the Socialist paradise.

The idea seems to be that faithful adherence to the Party line makes a better athlete of a guy, whether he goes in for soccer, weight lifting, or horseshoe pitching.

Everything is political, you see. That should surprise no one. After all, didn't the Kremlin order purges of Russian genetics, astronomy, fairy tales, and what not?

Let's suppose that football were as big a sport in the USSR as it is in the U.S.A. Could it be the subject of a political purge? Certainly! Listen, and remember, this is purely hypothetical:

**M**OSCOW, October 12—Football, introduced to the Soviet Union a mere 15 years ago, is in the throes of a political purge of sweeping proportions. This morning's edition of *Pravda*, in a front page editorial eight columns (three yards) long, subjects this brash young sport to a political going-over which for sheer bitterness of invective has had no equal in recent annals of Communist vituperation, except perhaps for the attack on Russian vaudeville last May.

Singled out for special abuse is the T Formation, an offensive deployment favored by a number of leading Soviet elevens. "The T Formation," says the *Pravda* article bluntly, "must be categorically condemned as a tool of Wall Street imperialist aggression. A typical product of capitalist deception and greed for yardage, this odious formation is the last desperate resort of homeless cosmopolitan coaches and of reactionary instigators of war and unnecessary roughness."

Describing the T as having developed "with the help of slave labor" at Stanford University in California, "alma mater of Herbert Hoover," the article charges that the formation was "smuggled into

the USSR by foreign agents in the employ of Wall Street."

The article goes on to say: "The poisonous essence of the T is deceitful sleight-of-hand and the criminal plotting of a quick opener. Its insidious machinations must be exposed as a foul conspiracy to split and disorient the working class, confuse the peasantry, and moustrap both the right and left vanguard of the struggle for peace."

To measure the full impact of the Politburo's sudden turn against the T, one need only recall that in the all-Soviet championship football game last fall, both contending teams—the Yalta University Bulldogs and the Ramblers of Notre Minsk University—used the T.

Following the game, won by Notre Minsk, 7-0, the teams' coaches, Yalta's Hmon Hickmannov and Notre Minsk's Karl Snavelovsky, were awarded the Order of Lenin and were given a salary increase of 200 rubles a year.

**I**N the light of these facts, the question of what possible motive the Kremlin could have for its renunciation of the T is commanding very serious consideration on the part of political observers here. The best informed of these venture the opinion that the explanation may well lie in the strained relations between the Cominform and Tito, whose naked reverse in midfield, so to speak, shook him loose and past the Cominform secondary.

A faint forwarning of the present purge was detected last April in the sudden disappearance of Coach Hickmannov during the annual spring training session of the Yalta eleven.

A very terse news item, hidden in the back pages of the monthly sports publication, *Skolastikanya Kodz*, announced without explanation his replacement by the second assistant line coach of Yalta's 150-lb. team,

a man named Vlasov, whom some few recalled as the author last year of a dull, doctrinaire treatise, "The Bolshevik-Leninist Approach to the Dialectics of the Downfield Block," in which he hailed Stalin as the originator of the forward pass.

Today's *Pravda* blast clears up at long last the mystery of Hickmannov's disappearance. He is now coach of the girls' freshman softball team at a small junior college a few hundred miles inland from Vladivostok.

No less than 16 outstanding football coaches are named in the *Pravda* article as politically derelict. In addition, the veteran quarterbacks of nine leading elevens, including all-Russia selection Vyacheslev (Skippy) Sorokin, are declared ineligible for future play by reason of "conspiratorial full spinners and opportunist fakery of hand-works."

It is not entirely certain what the fate of the delinquent coaches will be since the same issue of *Pravda* contains a full recantation, signed jointly by all 16. The coaches' statement says in part:

"Thanks to the brotherly reminder of our beloved Comrade Beria (Politburo member), we are now keenly cognizant of our unsavory trend toward right deviationism on pass defense, of our criminal neglect in blackboard drills to give sufficient emphasis to the crucial role of the lower segments of the middle class in tearing down the upper segments of the goalposts. Hail to Comrade Beria! Hail to Comrade Stalin, infallible signal-caller of the toiling masses, unpassable safety man of the world proletariat!"

**W**HAT Soviet football will be like following the purge can only be conjectured. In some quarters it is predicted that it will be stripped entirely of the "mystical-romantic trappings of decadent bourgeois razzle-dazzle" and revert to the simple, direct-pass-from-center power plays best exemplified

(Concluded on page 57)

By NATE FEIN

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PICKING an offense is probably the most important decision that confronts a high school coach. He must choose one that is suitable to his material, and that can be simplified and toned down for boys of high school age.

The Triple Threat T meets these qualifications. It sounds like a fancy title for an offense. Actually, however, it is a combination of three offenses which seem to blend together very nicely. These offenses are the T Formation with a man in motion, the Notre Dame Box, and the Quick T Formation.

I'll attempt to explain the reasons for picking these three, and why it was so named. First, I am definitely sold on the T with a man in motion. When I started coaching at Cathedral High School several years ago, the team was light but fast. I considered carefully before I chose the T. I felt this was the best offense for us, because it didn't require such strenuous blocking. The T depends on brush blocking, which is ideal for a small team.

The boys picked up the offense quickly and seemed to like it. It was at this time I began thinking about ways to throw the defense off guard. The main objective of a man on defense is to cover his territory and then, if the play doesn't come his way, to cover the ball.

While waiting for the snap, the defensive player will be planning his tactics. He will be studying the offense and plotting his course. If the offense can shoot something entirely different at him without giving it away, it is safe to assume that the play stands an excellent chance of working.

That, in brief, is the logic underlying our Quick T Formation. The Quick T simply consists of blocking from a standing position before the man goes in motion and before the linemen drop to a blocking position. The center is the only exception.

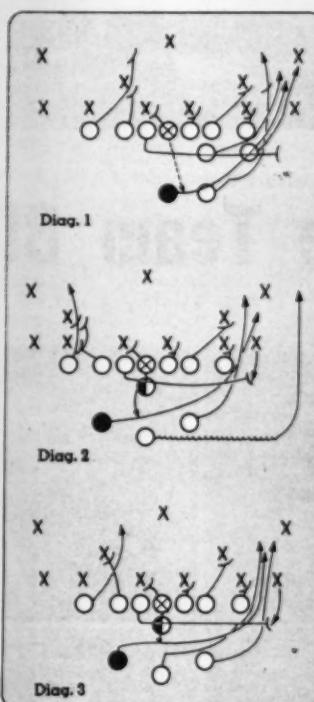
After working several plays from the T with a man in motion, we then hit from the Quick T. This type of play works amazingly well. The defense, instead of concentrating on their own tactics, begin to wonder when we'll hit from the Quick T again. This takes their minds off their job and we then feel we have them off guard.

About halfway through the season, we conceived the idea of using the Notre Dame Box to further confuse the defense. It worked well with the two offensive threats we already had. It seemed to succeed in keeping our opponents on edge, with their guard down.

By RIP DePASCAL  
Cathedral H. S., Wichita, Kan.

## Triple Threat

# T



How Play 27 (No. 2 back through 7 hole) works from the three basic formations. Top, from Notre Dame box; center, from regular T; bottom, from quick T.

This does not mean that we had three offenses with three different blocking assignments for each play. We overcame this by coordinating the blocking on all three offenses. For example, if we called a 43 play from any of the three offenses, the assignment for the linemen remained the same. Naturally, the backfield assignments varied a little on each offense.

I will attempt to show how we number the holes, how we call our signals, and why it is possible to

block from a standing position without tipping off the defense.

We come out of the huddle to the line of scrimmage. The linemen stand on the line with a hand on each knee, and the backs do the same after positioning themselves. The quarterback calls "Signals Set." On the word, "Set," the center drops over the ball. No one else moves. Then the quarterback calls, "Heap 1-2-3," etc.

When we say "Heap," one of three things happens. If we are going to hit from the Quick T, the linemen will block and the center will hand the ball to the quarterback. If we are going to shift to the Box, the linemen drop to their stance and the backfield shifts. If we are going to hit from our regular T, the man in motion starts on the "1" count after "Heap."

This may sound complicated and a little hard for high school boys to handle, but in reality it is a very simple offense. We call it the Triple Threat T, because it is actually an offense with three threats. We have three sets of passes and running plays which are all really one, as all plays and passes are the same on each offense so far as blocking assignments and pass patterns are concerned.

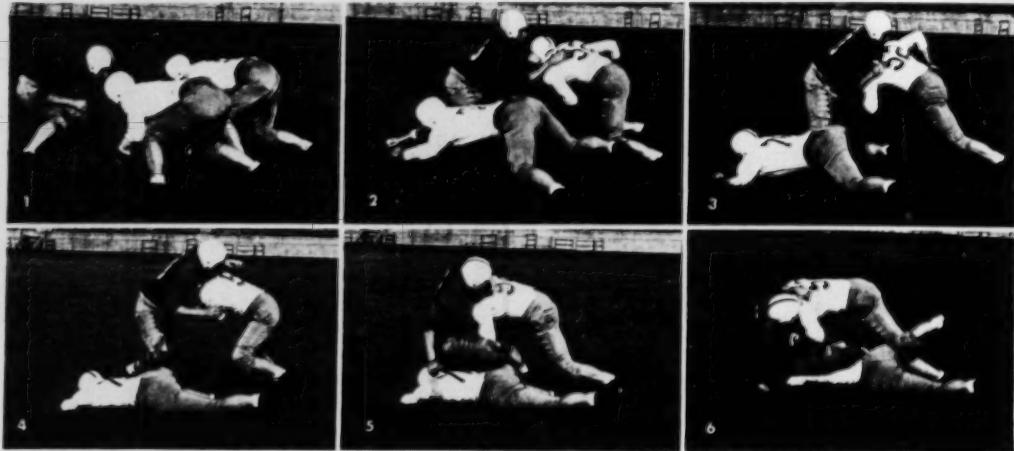
You may wonder how we designate our offenses in the huddle to save time in calling the play. As mentioned, our main offense is the T Formation. When using this offense, the quarterback calls 27 on 2-2, etc.; or, if the play is a counter play, he will call 27-45, which means number 2 back through the 7 hole with number 4 in motion and 5 as the snap signal.

When using the Box Formation, the quarterback calls Box Right 27 on 4-5, etc. When using the Quick T, he calls 27 on heap.

We believe in our offense and sincerely feel that it tends to distract the defense. Although our record is not outstanding, we have been held scoreless only twice in the last two years, and we have outscored our opponents each year in total points for the season.

Our school has only about 200 boys and 300 girls, while 75% of our opponents have from 1,000 to 3,000 enrollment. Our teams are invariably outweighed. Because we lack size and replacements, our defense has not been too strong and we have had to concentrate on an effective offense.

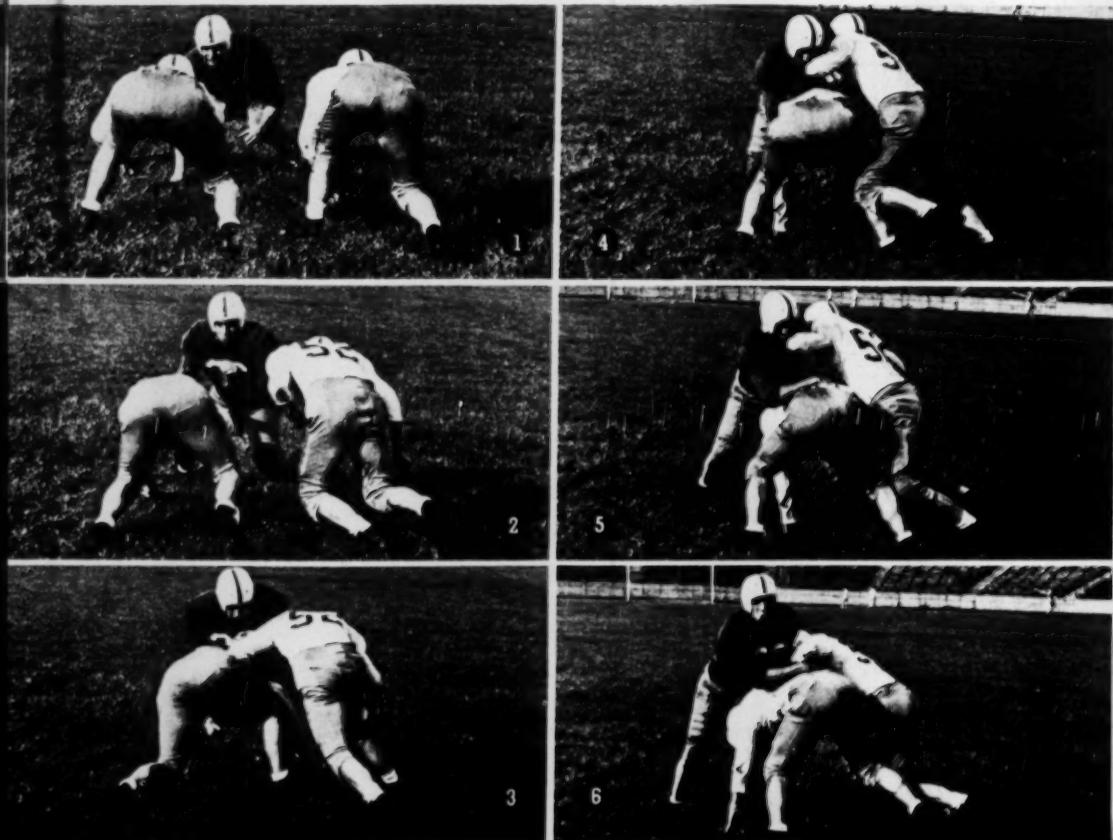
I would like to repeat, we have the utmost confidence in our offense — both coaches and players. The boys like it very much and find it simple to learn.

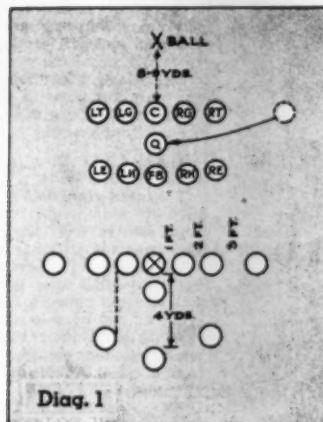


▲ High-Low

## Double Team Blocking

▼ Pivot-Post





# Georgia's Elastic T

By FLOYD B. SCHWARTZWALDER

**HEAD COACH, SYRACUSE UNIVERSITY**

 COACH Wally Butts' "Elastic T" is a thing of beauty, superbly executed by aggressive ball players. You do not actually have to see it to appreciate it. A diagrammatic glimpse of it on the blackboard is enough. That's where the writer saw it last summer (Eastern Penna. Scholastic Coaches Assn. Clinic).

The Georgia coach opened his course with a discussion of his method of huddling. The center is the huddle leader. He lines up first and leaves first. The other men set up as shown in **Diag. 1**.

The quarterback stays out of the huddle until his teammates are all lined up. He then steps in between the two lines. All suggestions to him must be given before the huddle. Once in the huddle, silence must be observed. The quarterback is instructed to point to any offender, and Coach Butts will promptly yank him.

After coming out of the huddle, the players line up with hands on knees. The quarterback says "Set" and then "Down." The line adjusts on the "Down," in or out, to get the proper angle on the defense. Having the backs upright rather than down on one hand, assures more comfort and makes it easier to move laterally.

Coach Butts uses a high hip line stance. He stresses keeping the left arm outside the knee to prevent a tilted left shoulder on the charge. This also assures better balance, a lower shoulder, and a lower charge.

The feet are almost even, with the right foot slightly back. The knees and toes are straight, and the weight is distributed over the balls of the feet. The linemen step off

with the same foot as the shoulder with which they block.

As contact is made, the blocker uncoils his power up through the defensive man. The arm of the contact shoulder is brought up smartly to enlarge the blocking surface and neutralize the opponent's charge. The opposite arm swings free and loose to give balance.

The center always moves his right foot up first to give clearance to the quarterback. Backs use a lead step in going laterally without motion. The halfbacks start with the inside foot when going straight ahead, while the motion back employs a cross-over step.

The numbering system works off the outside foot of the offensive linemen, and includes an additional wide outside number. The backs are numbered as indicated in **Diag. 2**. In a two-digit signal, the first number denotes the ball-carrier and the second number is the hole. The next number is the snap.

If the quarter wishes to put a  
back in motion, the second number

becomes a double digit and the snap is still last. When opposite or counter motion is desired, the quarter merely says opposite after he has completed the second number involving motion and snap.

Thus 43-23 would be a dive by the right half off the right foot of the right guard, with the left half or two back in motion and the snap on the count of 3.

**Diag. 3, 41** Dive. Good buck against overshifted 6-man line with undershifted backers-up.

LE blocks short-side BU with left shoulder.

LT checks DRT one count with left shoulder and continues on DRHB.

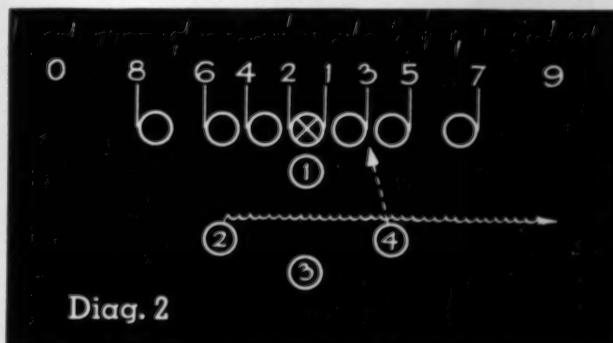
LG blocks strong-side BU with left shoulder if he remains in front of hole, getting head across in front of opponent. If he floats to left with fake, G will use reverse body block with left leg and left hip with head facing towards line of scrimmage.

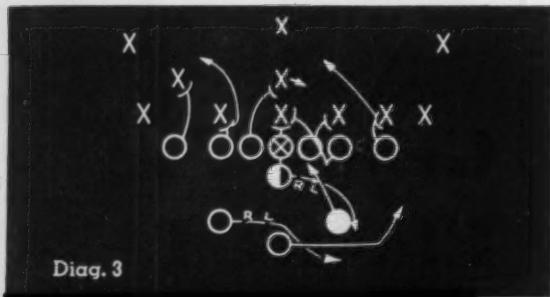
acing towards  
C posts DEG

RG blocks defensive LG with right shoulder, stepping off with right foot.

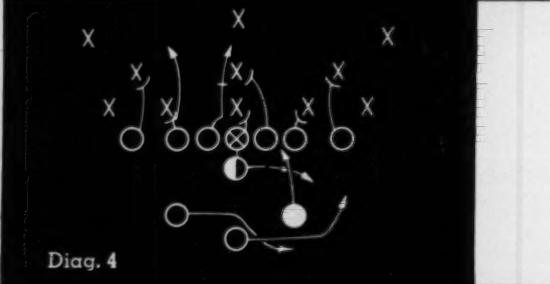
RT steps back with left foot, keeping body low, contacts DRG with left shoulder as lead blocker.

RE checks DLT one count with right shoulder and continues for safety.

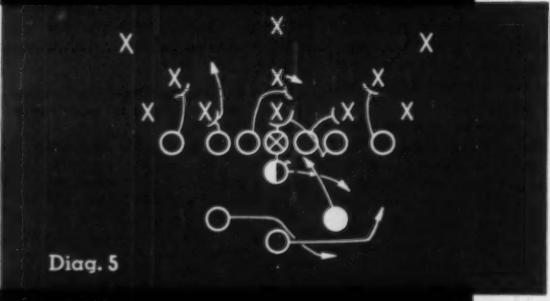




Diag. 3



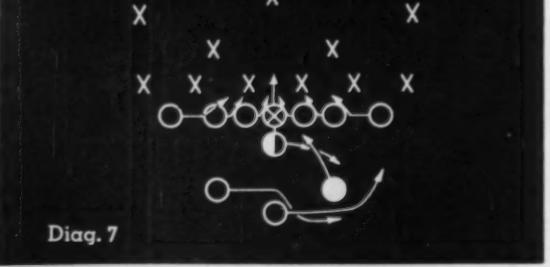
Diag. 4



Diag. 5



Diag. 6



Diag. 7

QB steps out with lead step to RHB, who dives into one hole.

RH starts with left foot, taking ball from QB on second step as left foot is back. "Having left leg and hip back prevents fumbles on the exchange."

FB and LH fake wide to right using a lead step.

**Diag. 4, 43 Dive Against 5-3-2-1 with Tackles Wide.**

LE takes right BU with left shoulder.

LT checks DRT with left shoulder and goes for DRHB.

LG checks DG over center with right shoulder and goes for middle BU if he is slow in reacting. Otherwise, he continues on for safety.

C takes DG over middle with left shoulder, stepping off with right foot.

RG takes middle BU with left shoulder.

RT blocks DLT with right shoulder, stepping off with right foot.

RE uses right shoulder on left BU.

RH now hits a little wider for three hole to favor fake and block of RT.

Other backs do same as on 41.

**Diag. 5, 41 Against Normal 5-3-2-1 With Defensive Tackles Playing Over Offensive Tackles.**

Line blocks same as on 41 against overshifted six, except RE takes left BU same as on 43. Backs operate same as on 41.

**Diag. 6, 41 Against Normal 6-2-2-1 With Angling Line.**

LE fakes at short-side BU, then slips to outside and takes DRH.

LT blocks straight ahead, looking for resistance in either direction.

LG drives straight ahead and takes short-side BU with left shoulder.

RG steps off with right foot and blocks to right with right shoulder.

C posts straight ahead.

RT steps back with left foot and blocks through area to right of center.

RE releases on strong-side BU, contacting him with right shoulder and with head across in front of him. Fake of FB and LH to right freezes strong-side BU long enough for RE to make an effective block.

If executed properly, this play will gain, regardless of defensive angles.

**Diag. 7, 41 Wedge Against High Charging or Looping Line.**

Offensive linemen use C as an apex. G's fit inside arms and shoulders behind C's arms. T's fit inside arms behind outside arms of G's. E's do accordingly. Backs react as in 41 play, except RH, who squats for a delay to permit linemen to form wedge. Offensive line moves in tight as QB says "down." Line hits low and hard with short digging steps and moves defensive line straight back.

**Diag. 8, 43 Dive Against Normal 6-2 With FB as Flanker.**

LE goes for safety.

LT takes RBU with left shoulder.

LG takes DRG with left shoulder.

C posts DLG with right shoulder.

RG leads blocks on DLG with left shoulder.

RT lead blocks to outside on DLT with right shoulder, stepping off with right foot.

RE posts DLT, making contact with left shoulder.

Flanker leads play through hole, taking LBU with right shoulder.

Other backs operate as in other 41 plays.

**Diag. 9, 29 Pitch-Out.**

LE angles to right, making a penetration of seven yards beyond line of scrimmage, then hooks back toward line and takes any floater.

LT takes RBU with left shoulder.

LG checks DRG one count and releases on safety man.

C steps off with right foot cutting behind defensive line to right and bellies back for outside-in block against any shuttling lineman.

RG takes DLG with left shoulder.

RT swings to outside three steps and turns on LBU with left shoulder.

RE posts DLE with right shoulder and then swings to outside three yards and hooks back on line of scrimmage looking for any shuttling linemen.

QB fakes dive to RH and pitches out to LH, who takes a right and left step laterally then bellies back so as to be going forward when he receives ball seven yards behind line of scrimmage.

FB takes three steps laterally, then angles on DLE, slipping head to outside and taking him with left shoulder.

**Diag. 10, 39 Pitch-Out With Left Half in Motion or as Flanker.**

Line blocks same as on 29 except RE who goes for cut-off block on LH after checking defensive LE.

LH blocks in on DLE with reverse body block with right leg and hip, whether as a flanker or in motion.

RH takes three steps laterally to outside, going as close to block on LE as possible and bellies to inside, looking for LBU.

QB stamps right foot and flips ball across right knee with two-handed wrist snap. This has proven fastest way that QB can release ball on this play.

FB gets ball on second step and gets outside before defense has chance to float.

**Diag. 11, 39 Toss-Out Quickie From Set Position.**

LE, LT, and LG operate same as on two preceding plays.

C, RG, and RT swing to outside three steps and turn up field, keeping inside shoulder low and taking first defensive man in their path to inside.

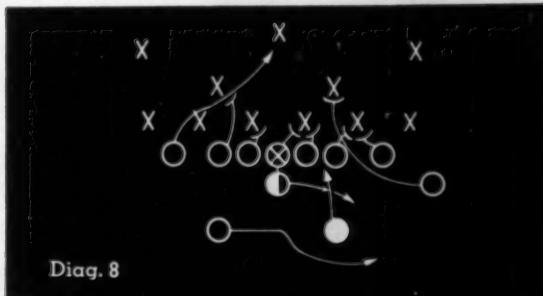
LH sets up as flanker two yards from DRE and one yard back from line of scrimmage. He uses reverse body block with right hip and leg on DLE.

RE posts DLE and releases for cut-off block on DLH same as above.

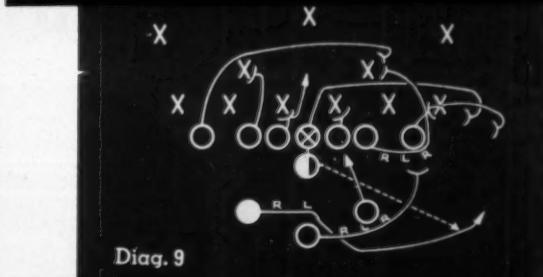
RH, FB, and QB same as on play 39.

**Diag. 12, 37 Slant.**

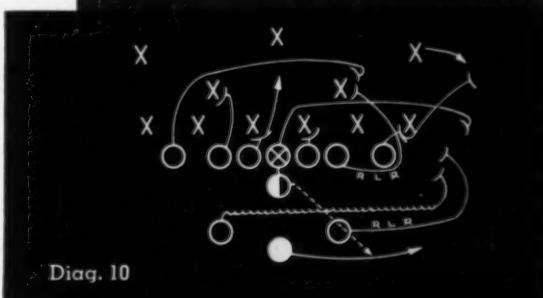
LE angles to right seven yds. deep  
(Continued on page 38)



Diag. 8



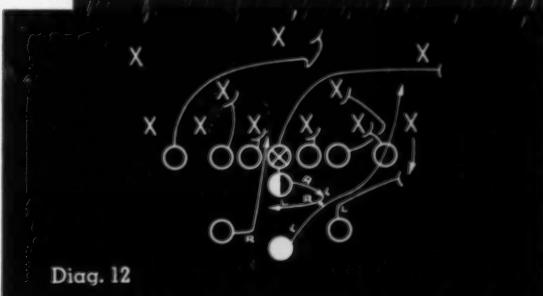
Diag. 9



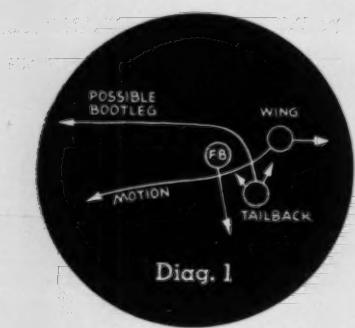
Diag. 10



Diag. 11



Diag. 12



## Screening the

# SWINGING A



**B**ACK in the October 1947 issue of *Scholastic Coach*, I presented the details of a modified single wing system called the Swinging A, with which I had had considerable success in schoolboy coaching.

Featuring a semi-spread line similar to the N. Y. Giants' famous A formation, this system was designed principally to make the defense overshift to meet man-in-motion strength and then hit back into the weakened holes created by the motion and the line spreads.

The article must have touched a sensitive spot, for it evoked a total of 27 letters from coaches wanting more information on the system.

Before going any farther, I would like to correct a false impression created by the first article in regard to the ball-handling. Several coaches felt that there was too much delay in the spins and that the tailback faked to the motion man, hesitated, and then handed off.

This is not the case at all. The fake handoff and the actual handoff are made at the same instant. The ball-handler fakes a give with one hand and lays out the ball with the other. Where the ball-handling is properly timed, you have three backs almost in a solid group, as shown in **Diag. 1**.

Several readers also pointed out that it was possible to counteract this defense by ramming the linebackers into the trap holes or having

them follow the wave of blockers to the hole. Another point brought out was the fact that the plays made little use of pulling linemen—a rather odd omission for a single wing system.

In this article, I will present my ideas for offsetting strong linebackers (by placing screens in front of many of the spins, handoffs, and carriers) and will show how men may be advantageously pulled out of the line.

In each instance, the men are pulled with the following objectives in mind: (1) To serve as a key-blocker on the play; (2) to criss-

cross with the other blockers to prevent linebackers from following the wave; and (3) to form a high screen in front of the ball-handler.

Another point worthy of mention is that the linemen and backs doing the blocking and crossing do so in a rather high manner. This not only aids in the screen but keeps the opponents from running through or jumping over a low block.

Wherever possible, I place guards in the pulling positions, as they generally do a better job than other linemen. Since most guards pulling out act as play leaders, the linebackers have a tendency to follow them. This is exactly what we want. If our pulling linemen, moving in opposite directions, tend to widen the linebackers to the outside, this will set them up for easier blocks by other linemen, as shown in **Diag. 2**.

Out of the queries received on the Swinging A, I will attempt to answer those I consider the most important, namely:

1. Could you show some plays without motion? **Ans.:** Practically all the plays diagrammed herein are of that type.

2. Do you ever use a spread with this system? **Ans.:** Yes, from time to time.



## By JOHNNIE GOLDEN

Gilroy (Calif.) Union H. S.

3. Could double wing spins be fitted into the system? *Ans.*: Diag. 16 shows a possibility along this line.

4. What type of blocking do you use on passes? *Ans.*: We meet opponents with a high charge and then retreat with them, trying to force them to the outside of the passer. This initial charge is identical to that in running plays and lessens the give-away of a pass. It also keeps a good, hard-charging lineman from running right through or over a lineman who is using a standing block.

**Diag. 3:** A basket-weave pattern of crossing that throws up a good screen for the carrier. Tailback steps back one step as if to pass. This holds linebackers just long enough to get blocking angle on them. Carrier favors long "gate" block on defensive left guard.

Quarter and full leading play make certain linebackers haven't been missed before continuing down field. They, too, try to cross one another to screen carrier once past scrimmage line. Play should be used on passing down.

(See page 14 for remaining diagrams.)

**Diag. 4:** In this double trap, interior lineman and blocker cross high to throw up screen. Motion to one side and possible bootleg to other, also aid in deception. Center and left end can switch assignments if they wish.

**Diag. 5:** This is not a cutback, but a slant. Works behind screen thrown up by fullback crossing path of lineman and blocker working on end. If blocker can handle end alone, guard releases on linebacker. Tailback judges speed so that he crosses right inside block on end.

**Diag. 6:** Tailback starts in motion, fullback raises arm as if to pass to him in flat and then smashes up

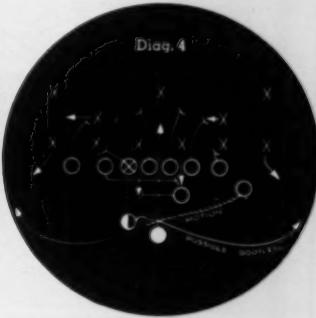
through trap hole. With tail going into flat and guard and blocker moving to that side with long blocks, play appears like a screen pass. This should pull linebacker and half into outside territory away from play. Guard pulls high to aid in screen. Full may also flanker when pass is to be used.

**Diag. 7:** Left end charges defensive tackle to drive him inside where center meets him with sliding block. Carrier favors side where double teaming occurs, as hole here should be wide. Wing must annoy defensive left end enough to keep him honest, before going for half-back. Outside tackle steps back as

**Diag. 9:** On this sweep, everything moves inside end on initial drive, then quickly breaks to outside. If defensive end comes across, sweep is run as shown. If end drifts or hand fights, play moves inside him and then quickly out. Right end crosses first on blocking along line. This crossing, plus pulling lineman on linebacker, aids in screen that is also helped by full and blocker driving in and then out, always in front of carrier.

On optional run-pass, left end (dotted line) goes behind defensive left half, tackle takes linebacker, and center slides to meet tackle.

(Concluded on page 14)



if to pull and this motion together with blocker's, indicates a play to other side.

Center's slide block also hints of play to other side. Criss-cross of linemen who take linebackers will also screen carrier as he passes scrimmage line.

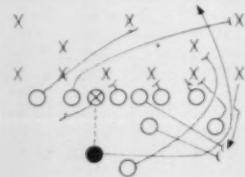
**Diag. 8:** Fullback takes quick forward step and spins at end of step, making full spin back into line. Carrier again favors side of double team. Strong-side tackle's jab step should freeze linebacker on that side, while wing brush-blocks end to outside. Left end brushes tackle inside for center, and right end drives at tackle so he doesn't feel trap coming.

## CHUCK BEDNARIK

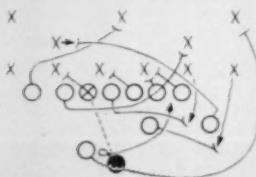
The U. of Pennsylvania All-American center, "linebacker of the year" in 1948, demonstrates the niceties of the long center pass. His hand positioning is slightly unorthodox. Instead of placing the left hand at the rear end of the ball, he places it up front alongside the right hand. The size of his hands permit him to do this without impairing either the speed or accuracy of the pass. After whipping the ball back, Bednarik brings his arms and head up quickly into blocking position.



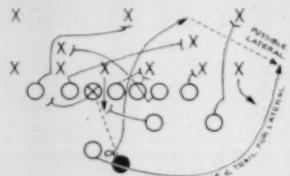
(Continued from page 13)



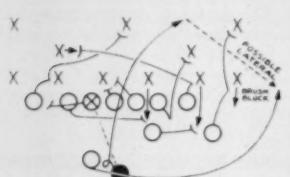
Diag. 5



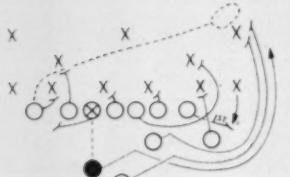
Diag. 6



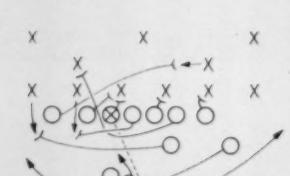
Diag. 7



Diag. 8



Diag. 9



Diag. 10

**Diag. 10:** Fullback fakes to both men, keeping two hands on ball at all times. If defensive right end follows wingback, blocker goes down field on linebacker or safety. If defensive right tackle is too strong, blocker may double team with guard.

**Diag. 11:** On this wingback shovel pass, tailback should look at flat and fake pass to full, then shovel to wing. Opposite might be used with a fake shovel to wing, then a throw to full. Right end, on such pass, will go down on defensive left half.

**Diag. 12:** Flanker shovel pass, made either overhand or underhand.

**Diags. 13-15:** Series of quick-hitting plays from left formation. Quarter may go into regular T stance behind center, receive a short direct snap, or reach up and take ball from center. Notice crossing screens before ball is handed off. Quarter continues fakes after handoffs.

In **Diag. 13**, the quarterback fakes to the fullback and hands off to the tail who drives between the weak-side guard and tackle.

In **Diag. 14**, the left guard comes back on the defensive tackle while the left end cross-blocks the defensive guard.

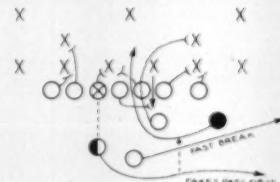
In **Diag. 15**, the tailback comes back between the defensive guards and is led by the wingback, the fullback blocking the defensive right tackle.

**Diag. 16:** A general idea of how double wing spins may be used from regular A. End is used here as another back and tail can hold ball as shown, hand off to full or wing, fake to both, fake or hand off to end, or even drive up on a stutter and give to blocker.

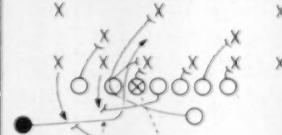
In the Swinging A, the line is always unbalanced to the right, regardless of the direction of the run. The backs, however, run from both sides. When they shift left, the fullback moves up to a position in front of the tailback.

Thanks to our line spread, we find the opposing lines deploying a lot wider. This aids our trap plays, permits better blocking angles on backs-up, and enables us to release men downfield rather than pull them.

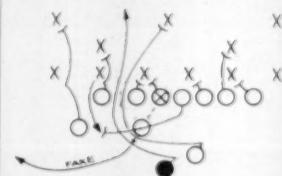
Coming from the huddle, our linemen position themselves with hands on knees. They drop to a tripod position at the quarterback's "Set!", then move out on a certain count. Our blocking back is allowed to cheat right or left to meet changing situations.



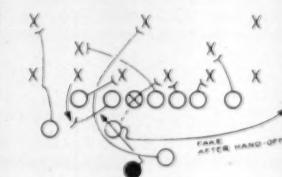
Diag. 11



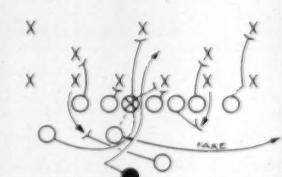
Diag. 12



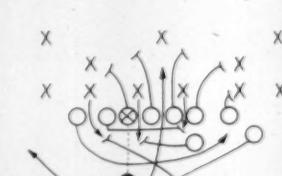
Diag. 13



Diag. 14



Diag. 15



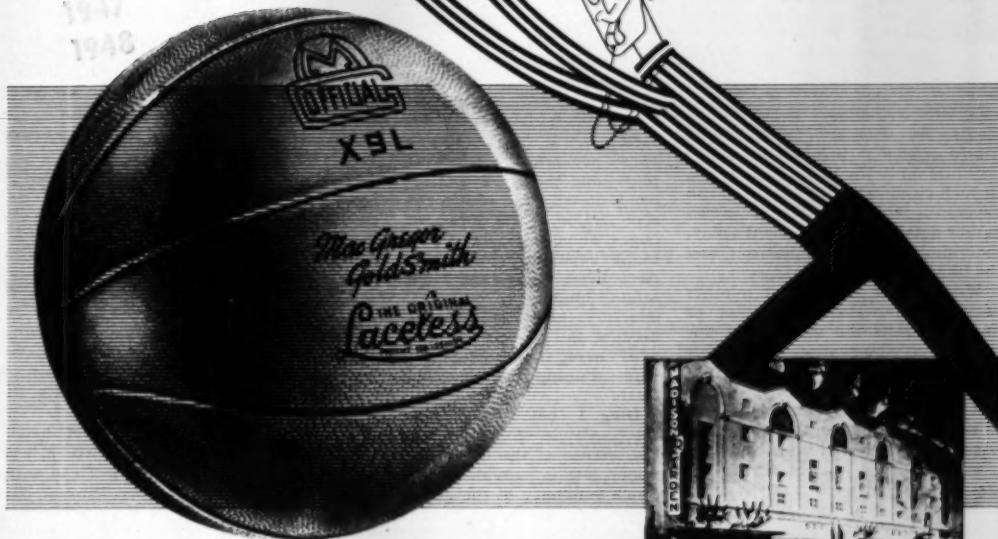
Diag. 16

1939  
1940  
1941  
1942  
1943  
1944  
1945  
1946  
1947  
1948

**194**



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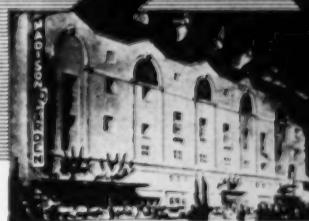
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## One-Peek Scouting



NO modern head football coach attempts to prepare his team for its coming schedule without as thorough a scouting program as his budget permits. In colleges where the allowance for espionage is adequate, scouts are assigned to follow a future opponent through its entire schedule up to the time of the game. In such circumstances, the scout can develop a method by which he can gather details of the opponent's play, individual player's mannerisms, and the like.

With by far the largest number of colleges, however, the problem of finances limits the scouting of opponents to observation of a single game. Naturally, this method is nowhere near as effective as the other. But with a certain amount of luck in seeing the opponents under comparable playing conditions, and with a well-prepared plan of attack, the scout can bring back a fairly satisfactory picture of the opponent.

Wayne University's coaching staff has to be satisfied with "one peek" at its future opponents. To help a scout select the most important points of the opponent's play and to enable him to record this infor-

mation as quickly and accurately as possible, the staff has developed a "Football Scout's Notebook."

The notebook is made up before each game. It contains about 75 prepared pages for recording offensive play—one page per play—and 10 pages on which to record the defensive tactics of the opponent. These pages, along with about 50 pages of blank paper, are placed in a tight Acco-Press essay-type binder. This kind of binder has proved more satisfactory than a looseleaf notebook because the paper does not slip out while being used or during the constant flipping of pages back and forth.

Diag. 1 (below) shows a page of the first type—for keeping track of the offense of the opponent. In the upper left is provided space for a quick summary of the general situation as the team being scouted moves up to start the play. The "Quarter" and the "Score" need only be recorded as they change; most of the time the scout can skip these two lines. He will, of course, always fill in the "Down" and the

"Yards-to-go" on the charts.

In indicating the "Yard-line," it is best simply to consider the goal-line of the team being scouted—from now on to be called "Our Team"—as the "0-yard line." The line "Our Team" is trying to cross for a touchdown is, therefore, the "100-yard line."

The "Defense" shows the defensive line-up of "Our Team's" opponents of the day and represents one of the few details of their play in which our scout is interested.

To understand how the scout using this system records an offensive play by "Our Team," it is necessary to refer now to **Diag. 2**. It will be seen that the basis of this diagram is the Team Formation chart that appears in **Diag. 1**. At Wayne University, we use the balanced T formation, and fortunately for scouting purposes, most of the teams on our schedule also use the T.

The Team Formation chart for this game is, therefore, made up for this style of attack. Before going out to scout a team using the single wing formation, the scout would, of course, have his Team Formation chart made up to fit this kind of offensive line-up.

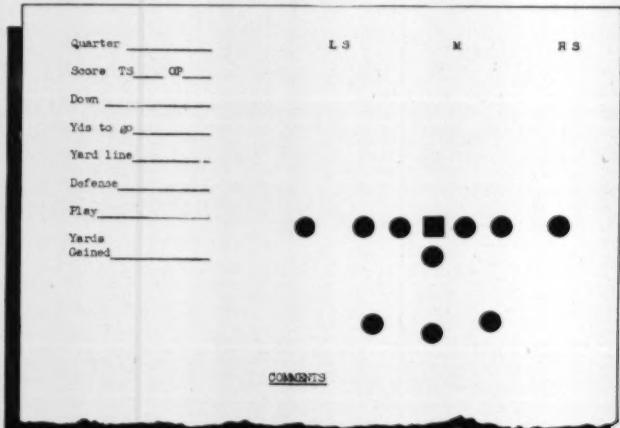
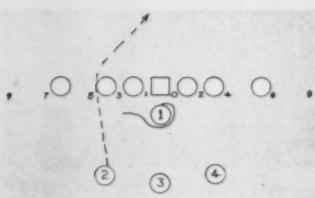
In order to record a play, numbers have been assigned (a) to the backfield positions and (b) to each of the "slots" through which the play may possibly be run. The quarterback is No. 1, the left half is No. 2, the fullback is No. 3, and the right half is No. 4. To identify the path of the play through the line, even numbers are used for the right side of the line, odd numbers for the left side.

Thus, for the right side, the slot between center and guard is 0, between guard and tackle is 2, between tackle and end is 4, to the

**Diag. 1 (right):** Formation chart for keeping track of opponents' offense.

**Diag. 2 (below):** How a play is recorded. This particular play is a 2-5 (No. 2 back through 5 hole), and is connoted thusly on line marked "Play" in data column.

**Diag. 3 (top of page):** Form for charting defense. After jotting down information called for in data column, scout concentrates on one particular defensive man.



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right of the end but close in is 6, and far out to the right is 8. In the same manner, odd numbers are assigned to slots on the left side of the line.

Diag. 2 shows that the ball was handed by the center to the quarterback (No. 1), who whirled and handed it to the left half (No. 2), who went through the left tackle slot (5). To accompany this quick sketch, the scout writes the figures "2-5" on the line marked "Play" in his data column.

Suppose that in another play the fullback were to go into the line of scrimmage over his own right guard, the scout would then write "3-2" as the code number for the play. This, with a quickly sketched diagram, provides a concise, easily-handled method of charting offensive plays.

We can now refer back again to Diag. 1. Above the Team Formation chart appear the letters "LS," "M," and "RS." These refer to the location crosswise of the field where the ball is put in play, and are interpreted as "left-side," "middle," and "right-side." Depending on where the ball was put in play with reference to the sidelines, the scout encircles one or other of these symbols.

The Formation Chart simplifies the recording of any changes in the style of lining up of the team being scouted. To alter the diagram when necessary, or to record important moves in the play, the writer uses a four-color mechanical pencil.

For example, suppose an offensive end is far out or there is a split in the line, alterations in the diagram are made with a red pencil. Men in motion or flankers are indicated in red. A blue line indicates the path of the ball during the play, with broken lines representing passes and solid lines the ball being carried by a runner.

Although this repeats the information given by the play code numbers, it has considerable value because of the greater ease with which any "extra-curricular" work, such as a "stutter step," can be drawn in rather than explained.

Another good feature of the Formation Chart is its adaptability in quickly diagramming the paths of the ends and other receivers on passing plays.

The space provided for comments allows the scout to scrawl down quick notes on other points, such as personal characteristics, distance and direction of punts, seconds it took to punt, etc.

Simple as the offensive play diagrams are, those used to record

After having John K. Cotton on its football team for four years, Wayne University couldn't bear to see him go and retained him as assistant football coach. In his article, Coach Cotton shows how the Tartar grid staff manages to do a fine job of scouting despite its limited means. The secret lies in a specially prepared "Football Scout's Notebook."

defensive tactics are even simpler. Several defensive plays can be recorded on one page. Diag. 3 shows the arrangement for keeping track of the defense used by "Our Team." In the column at the left is recorded the Down, number of Yards-to-Go, the Yard-line (indicated as in the offensive pages), and the defensive line-up used (5-2-3-1, 6-2-2-2-1, etc.).

Notice, however, that the line formation chart refers here to the other team—that is, that of the opponents of our team in this game. Before the ball is snapped, the scout jots down the information called for in his data column. From then on, he narrows his field of vision to one particular defensive man.

By using directional arrows to indicate the path of the lineman's charge, we can then figure out what man's duty is on a particular team defense; that is, whether he charges the outside shoulder, head on, or the inside shoulder, or whether he controls or backtracks. All of this can be quickly and clearly shown by lines and arrows on the chart.

Since the defense formations are used over and over again, the scout can get a fairly accurate account of the team's defensive tactics by this method. Details such as the depth of the secondary or tertiary can also be jotted down, or individual weaknesses can be jotted down in the space reserved for comments.

After the game and while it is still fresh in his mind, the scout should diagram on the blank pages of his notebook all offensive plays that differ from those of his own home team. These charts should be large enough so that they can easily be seen by a freshman squad on the practice field. The binder can then simply be held up for the squad to look at before they run the play against the varsity.

By mixing these plays with those of your own team, the freshmen can keep the varsity on their toes during the practice sessions.

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United World "Track and Field Series"

# Cross-Country Running

By EARL WATSON, University of Buffalo

OME of the major problems with which a cross-country coach must be thoroughly familiar are:

1. How to select the best qualified boys for the team.
2. Having a working knowledge and judgment of the best form for cross-country running, as well as the best method of teaching this form.
3. The kind and amount of daily work to prescribe for each athlete.
4. A knowledge of the best training methods in reference to care of the body, such as massage, diet, sleep, etc.
5. A knowledge of generalship in the handling of the team before and during competition.<sup>1</sup>

In connection with this last mentioned point, the coach must remember that successful coaching is not alone dependent upon how well he teaches the physical characteristics of the sport, but all too often on how good his psychological judgment is.

The monotony of training, in which there is no aspect of play, along with the continued emphasis on speed, keeps the runner constantly working under a pressure that can result in nervousness and irritability,<sup>2</sup> unless there is constant and skillful supervision.

Some of the more general rules to follow in the training of cross-country runners are:

1. For young athletes, underwork is better than overwork.
2. Stress complete mental and

physical relaxation both in practice and competition.

3. Require thorough warm-ups before practice and competition.
4. Require tapering-off after practice and competition; plenty of walking and jogging after a race or time trial will help prevent sore muscles, nausea, and headaches.
5. Use common-sense rules governing diet, sleep, and the avoidance of any bad habits that affect health or conditioning.
6. Cultivate proper form in practice so that it is natural to do the right thing in the right way in competition.<sup>3</sup>

One of the phases of training about which there has been a great deal of debate, is the development of "second wind." Some coaches say that second wind does not exist, and they are partially right, because some runners never experience its benefits. However, second wind has been defined by Albert E. Lumley, track coach at Amherst College, as the "physiological reaction by which the runner experiences a sudden relief from the agony of breathlessness; it is a readjustment of elimination to the increased production of waste."

He further states that the initial difficult breathing produced by strenuous exercise is accompanied by a disturbance of the normal acid-base balance of the blood and tissues. The relief of second wind is probably the result of adjustment toward a new equilibrium of the various mechanisms engaged in the supply of the much needed oxygen

<sup>1</sup>Lloyd W. Olds, *Track Athletics and Cross-Country*, p. 5, A. S. Barnes & Co.

<sup>2</sup>Dr. Charles H. Keene, *Lectures, Problems in School Health Supervision*, K-561, University of Buffalo, December, 1948.

<sup>3</sup>Colonel Harold Head, "Cross-Country Running," *The Southern Coach and Athlete*, March, 1944, p. 13.

to the active tissues. These adjustments involve primarily the circulatory, respiratory, and muscular systems.

When exercise is very strenuous, the new equilibrium may be such that each of these systems is functioning at its maximum capacity. Oxygen is being supplied to the tissues and carbon dioxide being removed at about the maximum possible rate. The pulse rate is diminished, and perspiration begins, thus affecting a greater heat loss from the body; hence, bodily efficiency rises.

Even though all runners may not experience second wind, the initial difficult breathing may be diminished through continual training.

Among the more common faults of which the coach must be constantly aware are:

1. Failure to run close to the left on the course.
2. Following an opponent with a choppy stride.
3. Failure to start out briskly.
4. Failure to relax during running.
5. Running flat-footed.
6. Setting pace on a heavy course on a windy day.

Although these are largely mechanical faults, their early correction will do much toward insuring success.

In spite of the most careful training procedures and the constant surveillance of the runners, there will be times when the following injuries are practically unavoidable: Sore feet, shin splints, sprained ankles, pulled tendons, stone bruises, blisters and infected wounds, adhesive tape irritation.

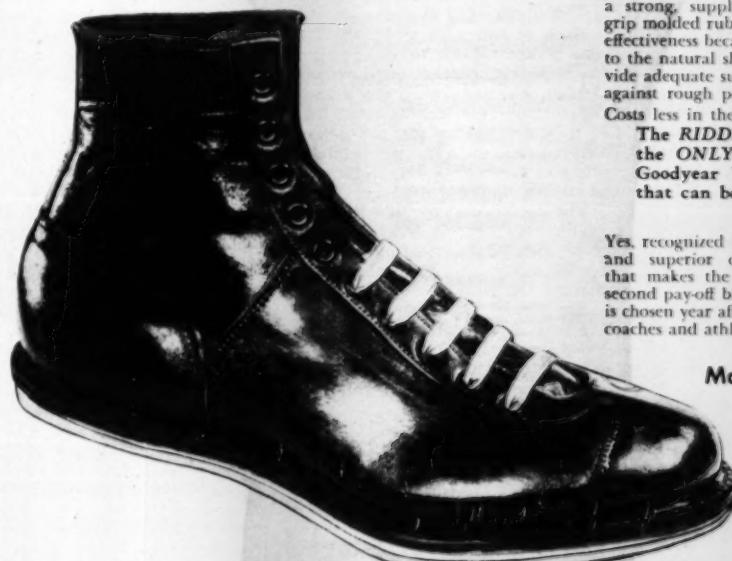
Therefore, it is essential that the coach be thoroughly trained in the treatment of these injuries; and that he regard it as his responsibility to see that immediate treatment is given.

A proper and complete warm-up often serves both as insurance against (Continued on page 50)

**A FAST BREAK..**  
**..A PIVOT..**  
**..A SUDDEN STOP..**  
**..THE SHOT..**  
**..TWO POINTS!**



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# JUMP BALL PLAYS

By GEORGE POTEN, Head Coach, Sampson College



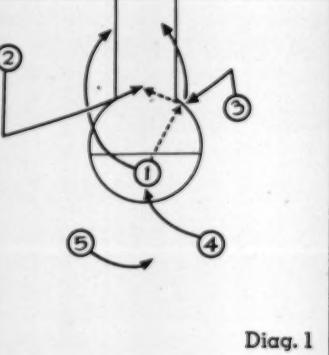
THE new rule requiring all jump balls to be held in one of the three circles will rouse the smart coach into availing himself of some of his old tip-off plays.

Back in the days when the ball was brought back to center after every basket, coaches spent a good deal of time developing quick-scoring thrusts from the center jump. If they did not have a tall center, they worked on ways and means of stopping these plays, or, better yet, of stealing the tap.

The new rule should definitely revive this type of play, and the time spent on perfecting jumping technique and scoring plays may make your team a winner.

Since most of the scrambling for the ball is done under the baskets, most of the jump balls will be held in the two foul circles. So let us first consider a few plays from each circle.

In the offensive circle, using an orthodox formation with both forwards playing near the basket and both guards back, we can dust off



Diag. 1

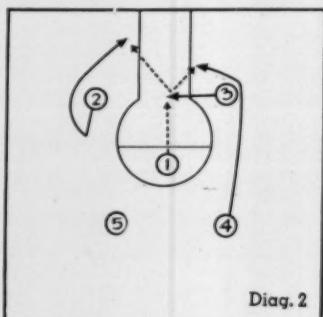
the old forward-to-forward play (Diag. 1). It looks so simple we wonder how it works so well and so often for a quick score.

No. 2 sets up well away from the circle toward the corner, while 3 plays fairly close to the circle. As the referee gets ready to toss the ball, 3 feints toward the basket and then cuts back, timing his cut so that he receives the tap (which 1 tries to place high and diagonally forward) at the point where the foul line and circle intersect.

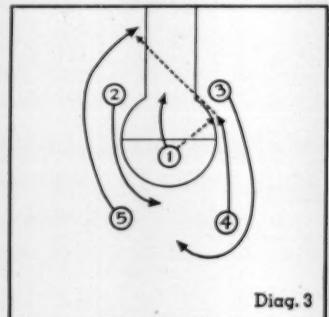
No. 3 gets up high to receive the ball and turns in mid-air to pass to 2. The latter has lost his man by coming up along the near sideline before the tap, and timing his quick cut and change of direction so that he will be cutting across in front of the basket a step in front of his man.

No. 1, after the tap, cuts to the left for the rebound; 3 goes in for the rebound or a possible return pass from 2; 4 comes in to the foul line for a long rebound or tap-out; while 5 covers defensively.

The fewer times the ball is han-



Diag. 2



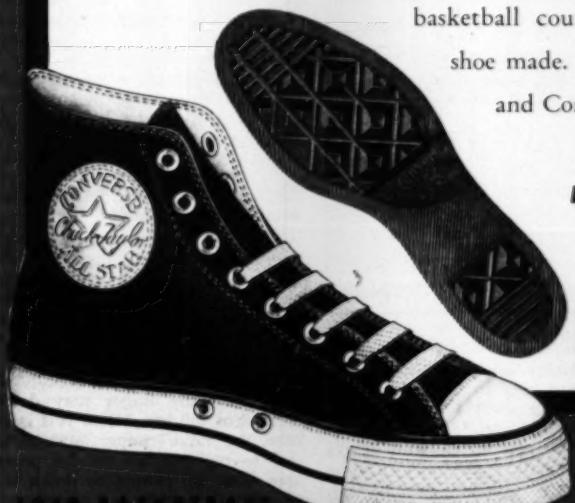
Diag. 3

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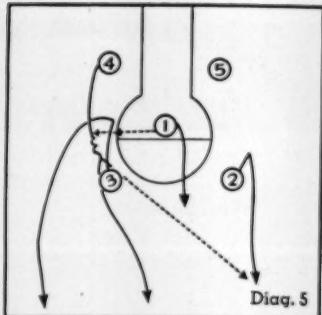
**Wigwam NYLON Socks  
will not shrink**

dled, the more effective the play will usually be. If the timing is good, 3 need only tap-pass to 2 for the shot.

A cutie that I like in this same situation is a variation of the old forward-to-guard-to-forward setup, with the tap going straight ahead to 3 who may tap-pass preferably to guard 4 or to 2 as an alternate on the opposite side (**Diag. 2**).

This might also be a good spot to gamble a little on a straight guard-to-guard play (**Diag. 3**), since it is logical to assume that the guards will be more open. The tap goes directly to the right side of the circle with 4 coming on the loop and high to volleyball pass to 5 coming down the opposite side.

No. 3 fades back to defensive position toward the outside of the court, allowing 4 to gain the ball near the outer edge of the circle. No. 2 fades back inside of 5 who times his cut to receive the pass from 4. Both 1 and 4 come in for the rebound.



We now have 4 breaking fast down the center flanked by 3 and 2, with jumper 1 trailing the play.

For an occasional solo dash, you may use the forward-to-forward play as shown in **Diag. 1**. This one may also develop into a three-man fast break with 2 coming down the right side, 3 the middle man, and 1 on the left. The play in **Diag. 2** is also useful for the quick break.

Any of these plays or variations are adaptable to jumps in the center circle.

Our jumper gives the signal for the play. He assumes a position at right angles to the line, with his jumping arm farthest from the line. He takes a half-crouched position with the knees flexed and trunk slightly bent forward, feet about shoulder-width apart.

As the ball goes up, he leaves the floor, thrusting his right arm and shoulder up and forward to tap the ball. The fingers are extended to the limit, with the tap being made with the very tips of the three middle digits.

Quite often, the extra half-inch of the middle finger may decide control of the tap. When this is the case, the middle finger must be the one to tap the ball to the proper spot. The tap cannot be downward or hard. It must be soft and slightly arched so that the receiver can meet the ball high.

The jumper must also be taught that his job is not finished with the tap. On most offensive plays, he should go in for the rebound or for a possible scoring pass.

Any team that can convert three or four jump balls into scoring opportunities will quite often tip the balance of a close game into its favor.

At the same time, it should be clearly understood that plays off the tap should be attempted only when you are assured of control. If there is any doubt about who will get the jump, it always pays to play safe.

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ROWS	FLOOR SPACE		**HEIGHT
	IN USE	*CLOSED	
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4	6 Ft. 7 In.	2 Ft. 0 $\frac{1}{2}$ In.	3 Ft. 9 In.
5	8 Ft. 5 In.	2 Ft. 3 $\frac{1}{2}$ In.	4 Ft. 6 In.
6	10 Ft. 3 In.	2 Ft. 6 $\frac{1}{2}$ In.	5 Ft. 3 In.
7	12 Ft. 1 In.	2 Ft. 10 $\frac{1}{4}$ In.	6 Ft. 0 In.
8	14 Ft. 9 In.	3 Ft. 3 $\frac{3}{4}$ In.	6 Ft. 9 In.
9	15 Ft. 9 In.	3 Ft. 5 In.	7 Ft. 6 In.
10	17 Ft. 7 In.	3 Ft. 8 $\frac{1}{2}$ In.	8 Ft. 6 In.
11	19 Ft. 5 In.	3 Ft. 11 $\frac{1}{2}$ In.	9 Ft. 0 In.
12	21 Ft. 3 In.	4 Ft. 3 $\frac{1}{2}$ In.	9 Ft. 9 In.
13	23 Ft. 1 In.	4 Ft. 6 $\frac{1}{2}$ In.	10 Ft. 6 In.
14	24 Ft. 11 In.	4 Ft. 9 $\frac{1}{2}$ In.	11 Ft. 3 In.
15	26 Ft. 9 In.	5 Ft. 1 $\frac{1}{4}$ In.	12 Ft. 0 In.
16	28 Ft. 7 In.	5 Ft. 4 $\frac{1}{2}$ In.	12 Ft. 9 In.
17	30 Ft. 5 In.	5 Ft. 7 $\frac{1}{2}$ In.	13 Ft. 6 In.
18	32 Ft. 3 In.	5 Ft. 11 $\frac{3}{4}$ In.	14 Ft. 3 In.
19	34 Ft. 1 In.	6 Ft. 2 $\frac{1}{4}$ In.	15 Ft. 0 In.
20	35 Ft. 11 In.	6 Ft. 6 $\frac{1}{2}$ In.	15 Ft. 9 In.

\*Dimension includes 4 $\frac{1}{2}$  in. space between top seat and wall.

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# The Penetration Charge

**K**EEP low and use your hands" often sums up the extent of defensive coaching that many young linemen receive. Undoubtedly, there is some good advice contained in this statement. But, it is merely advice and not coaching.

Most of us use a very orderly, step-by-step method in order to teach blocking and other football fundamentals. However, when it comes to the basic defensive charge, we give our boys an idea of what we want and then, very often, have them work out the details for themselves. It seems that a logical procedure in teaching a defensive charge would be time-saving and very efficient as compared to some of the present practices.

The basis of our defensive line play lies with the straight-ahead penetration charge. We like the charge used by most coaches in which the defensive player contacts his opponent with either his right shoulder and right forearm or left shoulder and left forearm, and simultaneously drives ahead the leg on the side he hits. He then brings up the other leg to gain balance and works for penetration in his assigned territory by staying low, using his arms to keep offensive men from his body, and taking short, choppy steps.

Over the last three seasons, we have tried several methods of teaching the charge to both high school and college linemen. The procedure that has proved most effective involves the initial use of blocking dummies and then a gradual development to work against hard charging blockers. There is a constant check on the boy's stance and all movements begin with the snap of a ball, just as they would in a game.

In our teaching, we first get the boy accustomed to his defensive

stance. This is very similar to the offensive stance except that his feet can be closer together and one foot can be well behind the line of the front foot. The front foot should be as close to the line of scrimmage as possible, and more weight should be placed on the grounded hand. If he desires, the defensive lineman can have both hands down.

When the defensive player has mastered his stance, he lines up in front of a blocking dummy. In slow motion, at the snap of a ball, he hits the dummy with his right shoulder, below a line drawn halfway up the standard size dummy. At the same time, his right forearm forcibly contacts the dummy with a lifting motion and is accompanied by a sharp step with the right leg to consolidate the ground gained. Hitting with the right side is alternated with hitting with the left side.

Our next step follows when the first move is well on its way to being mastered. Here, the boy follows step one with a short sharp step by the leg away from the side with which he hits. This quick follow-up step is essential for balance. The free arm is held firmly not more than six inches from the side of the body, in readiness to react to a block on that side and to fight against the pressure of the block.

In our third step, our lineman combines the first two steps and then tries to drive the dummy back with short, digging leg action. Long steps by a defensive lineman lack power and leave him in an unbalanced position and susceptible to a side-swi

Probably the most important factor in the play of a defensive lineman is his reaction to blocking pressure. Some boys will get it easily, while other boys will have to work long and hard to attain the proper reaction.

Our fourth step uses two dummies placed in the position of two offensive linemen. The defensive lineman directs his initial charge at one of the dummies as in step 1. Then, the second dummy is driven hard against him in order to simulate the direction of blocking pressure.

Here, the fundamentals in step 2 are brought into play. The free arm will protect that side and enable him to feel the block quickly. He contacts the dummy forcibly with a lifting action and the short quick step of the leg gives him balance. His charge is then directed against the force of the offensive block.

After defensive linemen have gained the necessary confidence, form, and coordination through work against the dummies, we have them work against blockers. At first they work against one half-speed blocker for steps 1, 2, and 3. Then, they face two blockers and work for reaction as outlined in step 4. The final step is work against blockers who are going at top speed.

Naturally, there must be a constant check during the season. Once the fundamentals have been instilled through constant practice, they can be adapted to varieties of defensive line play. When the charge is directed against a blocker, it is important that the defensive player  
(Concluded on page 56)



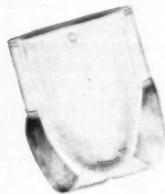
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By IRWIN KLEIN

Westchester County (N. Y.) Rec. Commission

All members of our association are tested annually. If they do not pass, they are moved down a peg. This tends to keep our members "on the ball."

In basketball we spend the first three sessions in a classroom, covering all the rules, as follows:

Nov. 16—Rule changes; Officials and Their Duties; Definitions.

Nov. 17—Rules 5-7.

Nov. 18—Rules 8-10; Comments and Professional Ethics.

At the next session, two of our top officials demonstrate court techniques on all phases of the game.

Our fifth and sixth sessions are devoted to checking interpretation and techniques of the candidates. These sessions are held in the gym with a high school squad scrimmaging. We employ our officials in pairs, letting each work 10 minutes. The group then corrects all errors.

Our seventh session is an open interpretation meeting which coaches are invited to attend. Our eighth session is devoted to review in order to clarify any questionable points, and the ninth session is the examination, set up by the National Board.

Under our setup, we do not give the floor test until late March at the Westchester County Amateur Basketball Tournament. Since the written examination is given the first Monday in December, it gives those candidates who pass it the opportunity to work junior varsity and club games. We require each candidate to work at least six games before being tested.

In the past, many would-be officials came up to the exam cold, not having worked any games that year, and as a result failed the examination. We now assign these candidates to testing games for experience. At these junior varsity games, the regular officials who work the varsity contests are there checking the errors of the neophytes. Between halves they show the candidate his mistakes and offer suggestions. After the game, the candidate receives a written report on his errors.

By examining the report he can check his errors. If the same errors crop up on subsequent sheets, he can definitely spot his weak points and thus brush up on them.

This system also gives the would-be official an opportunity to work before a crowd and receive recognition from a coach. This is a good way of becoming acquainted

## School Your Officials!

**D**O you want better officiating in your district? Then school your officials, as we do in Westchester County, N. Y. Anyone wishing to join our officiating board in football, basketball, or baseball, is required to go to "school."

We run an officiating school for each of these sports. Each school embraces nine two-hour sessions and covers every theoretical and practical phase of officiating procedure.

The results have been highly satisfactory. First of all, we have assured ourselves of a steady supply of trained officials—trained the way we like them. Secondly, we have obtained a uniform interpretation of the rules, thus eliminating the main fault with most officiating today—the inconsistency in individual interpretation.

A glance at the "curricula" will give you an idea of how we do it.

In football, we first cover the rule book, with different members of our Board lecturing each evening on certain rules. It takes five two-hour sessions to cover the code, as follows:

Sept. 6—Rule 2, Definitions of Playing Terms; Rule 3, Periods, Time Factors, and Substitutions.

Sept. 7—Rule 9, Conduct of Players and Others; Rule 4, Acts to All Downs.

Sept. 8—Rule 8, Scoring Plays and Touchback; Duties of an Official; Signals.

Sept. 9—Rule 6, Kicking the Ball; Rule 7, Snapping and Passing the Ball.

Sept. 12—Rule 10, Enforcement of Penalties; Rule 5, Series of Downs and Number of Downs After Penalty.

Our next session is devoted to review and a clarification of any questionable points. All these sessions are conducted in the classroom.

For our seventh session, we move out to the field for a demonstration of three- and four-man officiating, stressing position, signals, teamwork, and techniques.

At the next session, we give the written quiz; and then, at the last session, the field test.

Regular scrimmages are arranged all over the county, with each official working a quarter as a referee, a quarter as an umpire, a quarter as head linesman, and the last quarter at the down box. In this way, each official is tested on his ability in every position, rather than on a specialty.

The candidates are tested in groups of four, with three Board members passing judgment on each man. Each judge has a regular test sheet and marks the candidate on seven points. (See accompanying chart.)

To pass, the candidate must receive a mark of 85% or better in both the written and field examinations. Upon passing both tests, he becomes a probationary member and is placed on trial for a period of a year. If at the end of that time his reports are satisfactory, he takes another exam and becomes an associate member. The next year, upon passing his test, he becomes an active member.

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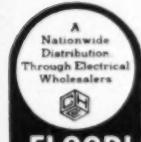
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with many high school coaches and prove to them that he is capable. Many of our officials have received regular varsity game assignments through this medium, since the coach is the one who does the actual hiring. It is an opportunity and many officials make the most of it.

In testing each candidate, we have him work two games, with an examining committee checking on him. Each candidate gets marked by eight different examiners.

The examiners check the candidates on seven essential points, namely:

1. Uniform (10 pts).
2. Signals (10 pts).
3. Position on the field (10 pts).
4. Judgment and enforcement (25 pts).
5. Handling whistle (25 pts).
6. Timing (10 pts).
7. Cooperation with other officials and over-all coverage of the game (10 pts).

As you can see, the maximum score is 100%. A grade of 85% is needed to pass. After passing both

the written and the floor tests, the official is then voted into our organization for a probationary period of one year. At the end of that time, if his credentials are in order, he becomes an active member.

In baseball, the school utilizes the first four nights to cover the rules. The fifth session is given over to a demonstration of two-man officiating, and the seventh and eighth nights are used to check and correct candidates on officiating techniques. At the ninth session, the written test is given. The field test is given at practice games with coaches and officials checking judgment, decisions, speed of applicants, and their knowledge of the rules as well as position and teamwork.

Attendance is compulsory at each school. We feel that since the faculty is interested enough to give so much of their time to help improve officiating, there is no reason for those who are to make a career of officiating to be absent. A nominal fee of \$15 is charged for each of the schools, with five of these dollars going toward the cost of the examination.

## FOOTBALL PRACTICAL EXAMINATION

Name of Applicant \_\_\_\_\_

Address \_\_\_\_\_

Maximum Score	Grade
---------------	-------

1. Did applicant appear for assignment promptly and in neat uniform? 10 pts. \_\_\_\_\_
2. Were his decisions announced in a manner clearly understood? 15 pts. \_\_\_\_\_
3. Was applicant's speed in action good? (Ability to keep ahead of the play-off the court and out of the play—and get to the play.) 20 pts. \_\_\_\_\_
4. Was his judgment prompt and accurate? (Correctness of decision.) 25 pts. \_\_\_\_\_
5. Was technique used in toss good? 10 pts. \_\_\_\_\_
6. Did he express a spirit of comradeship rather than antagonism? 10 pts. \_\_\_\_\_
7. Signals. 10 pts. \_\_\_\_\_

(Passing Grade 85%) Grade Given \_\_\_\_\_

Date \_\_\_\_\_

Signed \_\_\_\_\_

(Examiner)

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# Soccer Defense:



## TWO or THREE BACK?

By D. Y. YONKER  
Head Coach, Drexel Institute

OVER the past two decades there has developed in soccer a "check upon a check" which is effectively but discouragingly restricting scoring.

Up until 1925, it was necessary for a player to have three opponents between himself and the goal he was attacking when entering into the play. Under these conditions, it was rather easy for the defending side to create the "offside trap" and thus effectively limit scoring.

The spate of no-decision contests was discouraging to say the least. Realizing that this situation was placing the game in disfavor, the lawmakers of the Federation International de Football, after great discussion, relaxed the offside rule.

They reduced the number of necessary defenders between attacker and goal to two, thus hoping to open up the game and increase scoring. And this it did for a very short time.

However, as in all fields of sports, new systems of attack induce new defenses, and not three years had passed before the great Arsenal team of Britain countered the new threat with a defense which came to be known as the "three-back game."

Under the old offside regulation, it had been the rather universal practice to employ the center half-back as an attacking member for at least three periods when in possession of the ball.

Indeed, many clubs were still using a system in which the center half literally played a secondary center forward position, always ready to receive a back pass from his inside forwards and drive toward the goal.

Teams thus trained had the advantage of a six-man attacking combination, and defenders were hard put to prevent scoring. In this type of soccer, the backs were employed in the vertical fashion, one playing considerably ahead of his colleague while on offense and always in position to counter the threat of the opponents' center forward at midfield.

This practice per se led to the successful development of the "offside trap." Wing halves followed the attack at a discreet distance to be ready to join in defense against the fleet wing men whenever the opponents gained possession.

Arsenal's innovation changed this usual form of attack and defense. It enjoyed such huge success as a counter move against the relaxed offside rule that other teams were quick to adopt it. The new disposition of players was unorthodox, but what of it? Attack was again deemphasized.

In the new game, the backs played laterally (parallel to the end-line) and rather generally kept abreast of one another in most aspects of attack and defense. In this position, they found themselves drawing apart toward the wings in order to relieve congestion in the center of the field with the center half.

Thus, logically, they became the guardians of the opponents' wingmen, and of necessity the wing halves in a more forward position moved toward the center to cover any advance by the opponents' inside forwards.

The center half became to all intents and purposes the watch-dog of the center of the field with prime

responsibility toward seeing that the opposing center forward was effectively stopped.

He could do this only by remaining somewhere in his opponent's immediate vicinity. As a result his days of advancing beyond mid-field on attack were over and it became rare, indeed, to observe a center half back shooting for goal.

In Britain and parts of the continent, Arsenal's new defense was copied from the start. In America, however, this style of play was adopted only recently.

One reason for this has been the upsurge in popularity of soccer since the war years, and with it the development of a greater number of well-turned out attacking forwards both in the professional and college ranks.

Mr. Ivan Sharpe, writing in the British press, notes that this accent on defense has definitely reduced scoring among the leading teams in the British Isles. His study is of interest to the followers of the sport.

Under the same offside law but using different systems of defense, the following records have been established.

In 1947-48 using the three-back style, division champions compiled the following records of goals scored:

Division	Winner	Goals
1st.	Arsenal	81
2nd.	Birmingham	55
3rd. (No.)	Q.P.R.	74
3rd. (So.)	Lincoln	81

In 1931-2 with the championship teams still adhering to the older, two-back game, the records appear as follows:

Division	Winner	Goals
1st.	Everton	116
2nd.	Wolves	115
3rd. (No.)	Fulham	111
3rd. (So.)	Lincoln	106

Pursuing his study further, Sharpe demonstrates that the average number of goals scored by championship teams in three distinct periods since the development of the three-back defense has steadily decreased. Thus:

Division	1929-33	1933-37	1937-48
1st.	116	101	82
2nd.	103	92	75
3rd. (No.)	99	99	77
3rd. (So.)	103	95	95

The conclusions to be drawn are obvious. A coach of any soccer team is faced with two questions. Shall he develop a three-back game with emphasis on defense and thus place

(Concluded on page 61)

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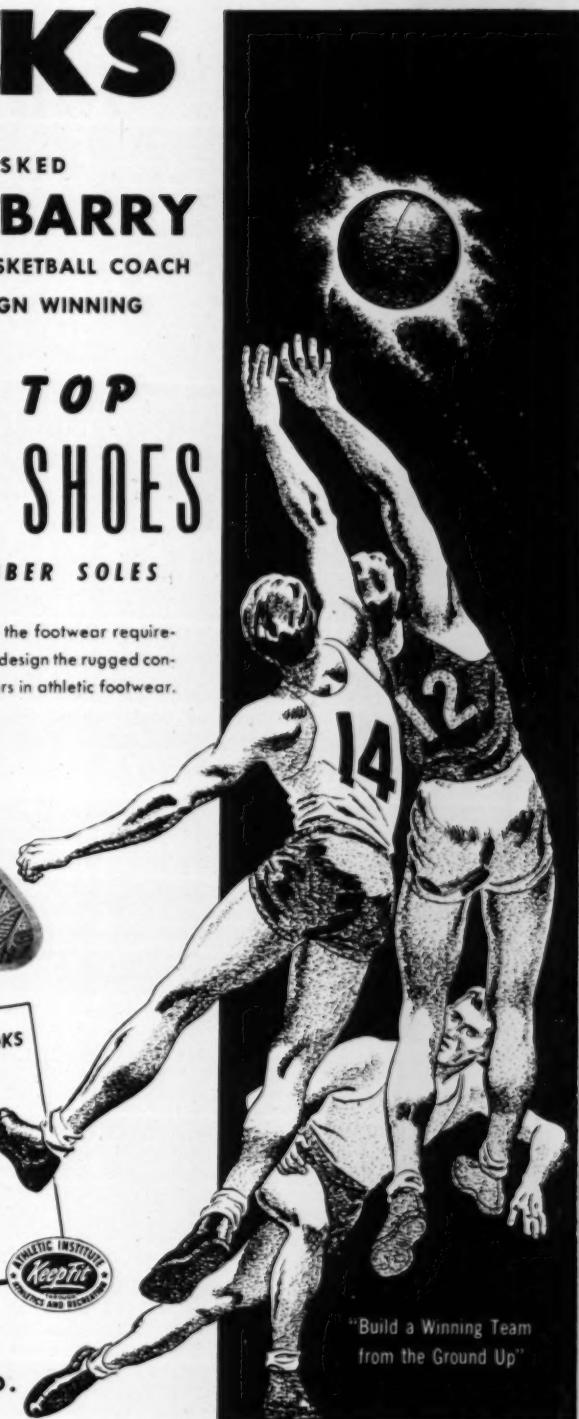


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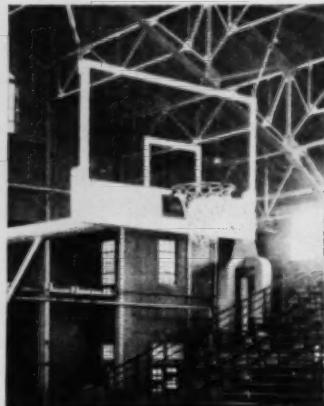
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## MEET **Johnny Square**

By EUGENE A. CONKLIN

EVERY high school athletic instructor is painfully aware of the existence of "Johnny Square," the youngster who simply isn't sport conscious.

Many Johnnies are underweight or simply not equipped by nature for such games as football, basketball, and baseball. Others are the "scholastic" type, who consider sports as so much wasted effort. Still others just do not understand the mechanics of the major team games.

A recent survey revealed that the typical high school in the United States boasts from four to seven such individuals per hundred pupils. Not a great percentage, true. Yet the fact remains that some sort of sports program must be planned for them, for the sake of their health and eventual well-being.

In the Dominion of Canada, Johnny Square has an inspiring future—as a result of the coordinated efforts of their high school coaches. For example, all boys who are ignorant of what makes football, basketball, and baseball "tick" are given the opportunity to attend an "Information Please Session" two nights a week.

During these sessions, athletic assistants strive to explain the structure of the big three in sports, and with the aid of diagrams and motion pictures, inculcate the essentials to the assembled youngsters.

Then each of these youngsters is assigned an "athletic helpmate." The latter is a student well-versed in athletics who serves as a companion to Johnny Square and attends school contests with him.

It is the task of the helpmate to interpret the various plays and help Johnny get a real kick out of the game. After a few such sessions, Johnny is able to attend on his own with others of his scholastic set.

Secondly in the Dominion, out of every school physical training class, two students are selected as "junior coaches." It is their task to work with the boy or boys who can't seem to catch on to the work or who seem unusually clumsy.

Under the junior-coach arrange-

ment, all Johnnies from the various classes meet several nights a week, and compete against one another in a seasonal sport, with the junior coaches serving as officials. Because all of them suffer from the same handicap—a lack of fundamental knowledge—they start from scratch and the resulting contests are well worthwhile.

These junior coaches take pride in working with those who cannot seem to make the grade. In addition to receiving extra credit, they receive valuable training in coaching; and many of the youngsters whom they lend a helping hand to, eventually make some squad or other.

There are some youngsters, however, who simply are not cut out for group sports—who require individualized activities. With this thought in mind, many Canadian schools have instituted a special set of sports such as badminton, tennis, archery, bowling, ping pong, and swimming.

Every boy is given an opportunity to receive instruction in these sports. But there is much more to the picture than that. These high schools appoint an individual sports publicity director whose duty it is to publicize the sports through releases to newspapers, through pictures of the youngsters engaged in such sports (pictures placed conspicuously around the school), and through posters throughout the community in neighborhood stores.

Moreover, the parents of every Johnny receive a personal call from the athletic instructor or an assistant. They are urged to cheer Johnny onward and to encourage his participation in the program.

Dominion administrators have also instituted award letters and tournaments for individual sports on a par with those for the team sports. The lettermen in individual sports receive colorful letters which, when displayed on a sweater, stamp the wearer as being as much an athlete as his pigskin-toting compatriots.

The net result of this program has been twofold. Many students of the Johnny Square class have been converted into first-class assets for coaches, while others have discovered that sports are not as dull or worthless as they originally thought.

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including e-Propyl  
Alcohol

12.3%  
2.1%  
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6.0%  
6.0%  
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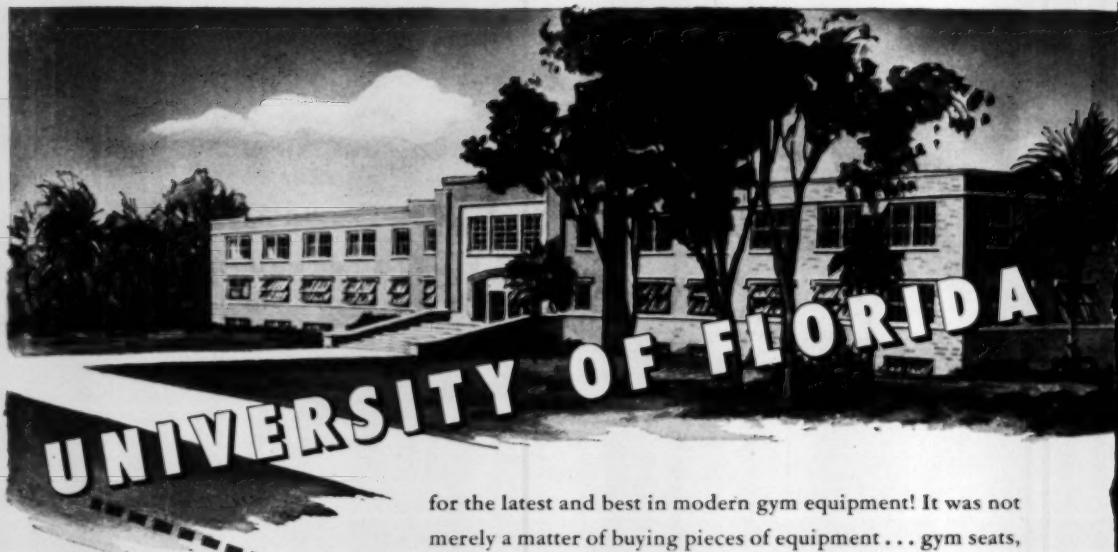
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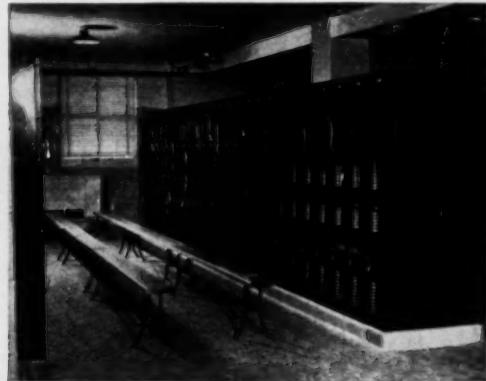
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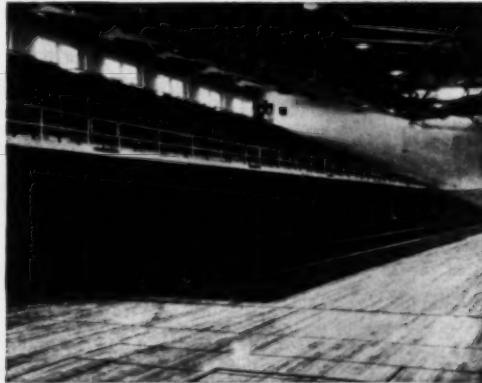


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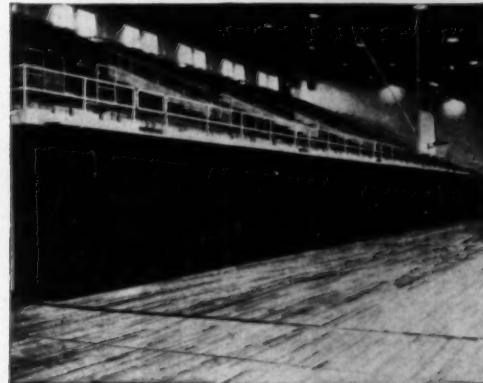
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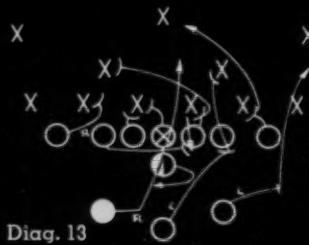
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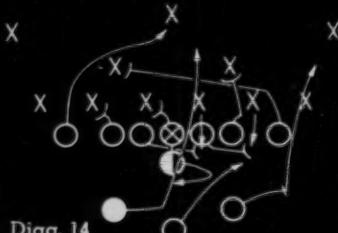
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## Georgia's Elastic T Formation

(Continued from page 11)



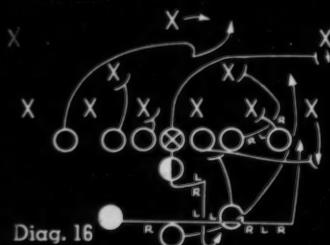
Diag. 13



Diag. 14



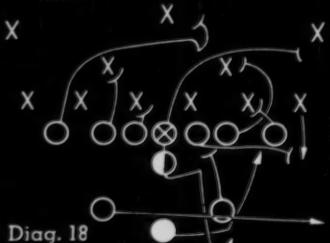
Diag. 15



Diag. 16



Diag. 17



Diag. 18

and looks back for shuttling linemen. If none endanger play, he continues on for S.

LT takes RBU with left shoulder. LG left shoulders DRG to left. C makes cut-off block on DLH with reverse body.

RG left shoulders DLG in. RT swings outside three steps and turns in with reverse body on LBU. RE steps with left foot and left shoulders DLT to inside.

RH steps off with left foot to get inside-out angle on DLE. Slips head to inside after faking outside, and right shoulders LE to outside.

QB takes right lead step, then left. After handing off with left hand, he swings around to right, stepping back and over with right and left, and fakes to LH with right hand under and left over.

RH steps right, facing and leaning toward sideline, then pivots and fakes run through 1 hole.

FB starts with left foot and forms pocket on left hip. He slants at 7 hole after taking ball on second step from QB.

**Diag. 13, 21 Trap Against 6-2-2-1.** LE has tough job on this play. He steps inside with right foot and lifts up through DRT with left shoulder.

LT steps out close to line with right lead step and contacts DLG with left shoulder if he crashes hard toward fake of FB. If DG holds up on scrimmage line, LT steps in toward line on second step and roots him out with right shoulder.

LG Posts DRG. C lead blocks with left shoulder, stepping with right foot as always.

RG bluffs DLG with left shoulder, taking a left and right step straight away, then uses right shoulder in reverse body block on RBU.

RT right shoulders LBU. RE checks DLT one count and goes for S.

RH same as on 37 except he slips DLE after one count contact and goes for DLH inside out.

FB starts fake at 5 hole and drives into BU, slipping head to inside.

QB steps same as 37, but fakes to FB and hands off to LH who goes in 1 hole.

**Diag. 14, 21 Double Trap Against 6-2-2-1 (a variation of single trap).**

LE releases on S.

LT left shoulders DRT out.

RG pulls with right foot and blocks DLG—normally with left shoulder, since latter usually shuttles when RG pulls.

C has tough single block at hole with left shoulder on DRG.

RG pulls and traps DLT with left shoulder and roll with left hip.

RT waits for RE to pass, taking jab-step with right foot at DLT, then right shoulders LBU.

RE takes left and right step and

crosses over for RBU with right shoulder and roll with right hip.

Bucks same as 21 single trap.

**Diag. 15, 21 Double Trap Against Overshifted 6-Man Line With Under-shifted Backer-Up.**

LE takes RBU with left shoulder. LT left shoulders DRT.

LG pulls on DLG and drives him out with appropriate shoulder as on previous trap plays.

C posts DRG.

RG lead blocks DRG with left shoulder.

RT steps back with right foot for delay and checks DLT with right shoulder one count. He then releases on S.

RE steps inside with L foot to bluff DLG, then goes for LBU with R shoulder and right hip.

Bucks react as on 21 double trap.

**Note:** Since Coach Butts' line technique continues in the same pattern, the reviewer will now confine his analyses of the plays to the essentials necessary for clarification.

**Diag. 16, 27 Cut-Back.**

RT takes short right and left step, just clearing RE, and swings through hole on third step to establish quick contact on LBU with right shoulder, slipping into reverse body block with right hip and right leg.

This also gives clearance to RG, who pulls on DLE. If DLE comes deep, RG contacts him with left shoulder and slips into roll with hip (left). If E waits or comes inside, RG roots him outside with right shoulder.

RH takes full blast at DLG with left shoulder on fake dive at 3 hole.

FB slants at 7 hole, taking first defensive man that obstructs his path.

QB reverse spins on ball of right foot and plants left for a fake to RH. He then shuffles back with a fast right and left step and hands off to LH with left hand under ball. He then drifts back to fake pass and follow play.

LH starts laterally with right lead step. He receives ball from QB with left hand underneath, palm up, and right hand across body, palm down, to form pocket. Ball is taken on third step when left leg is still back with right planted forward. LH cuts up sharply on fifth step.

**Diag. 17, 27 Cut-Back Against 5-3-2-1.**

LG is now cut-off blocker on DLH as C is not free to release with a DG playing head-on him.

RG must now be more conscious of rooting DLE out with right shoulder, as he is normally playing in closer than on a normal 6-man line.

RE normally uses right shoulder block on DLT. He steps laterally with left foot and shoots head across in front of tackle's legs.

RH drives on through 3 hole and assists LT on MBU.

LH angles for hole soon as receives

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\*Manufactured under Aluminum Company of America patents.



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**LOWEST IN COST TO SERVICE** Relamping is done without disturbing reflector—and with one hand if necessary. Door glass (which is strong enough to take a direct blow by a ball) is spun-sealed to reflector, keeping out dirt, rain and bugs. No tools required for any servicing operation—even tilting for easy cleaning of front—and reflector always returns to its proper position.

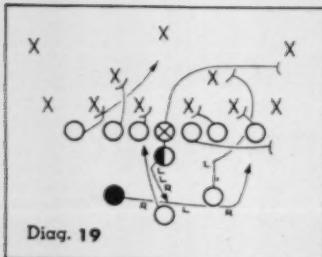


Planning an installation  
for softball . . . baseball?

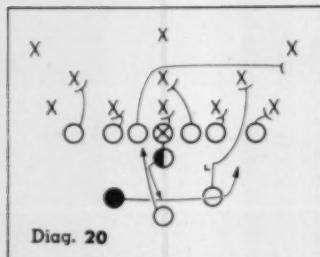
Engineers of General Electric's Illuminating Laboratory have prepared Standard Plans to help you get proper floodlighting at any level you desire. They're yours for the asking. GEA-2918 covers softball installations; GET-1373 covers baseball. See your nearest apparatus agent or G-E Sales Office, or write Apparatus Dept., General Electric Company, Schenectady 5, N. Y.

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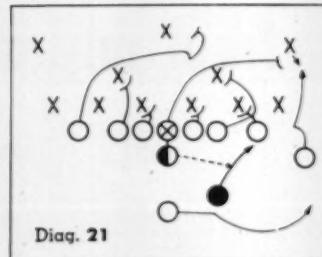
431-129



Diag. 19



Diag. 20



Diag. 21

ball, favoring block of RE and watching block of FB on corner BU.

FB leads play, taking corner BU in with left shoulder. If BU has angled outside, FB then rides him on out with right shoulder.

**Diag. 18, 37 Slant Against Normal 6-2-2-1.**

RH fakes dive in 3 hole and blocks DLG with left shoulder.

QB reverse spins same as on 27, faking to RH and handing off to FB. He also fakes to LH wide and continues back to bluff pass.

FB steps parallel to line with right lead for delay, and hits in 7 hole.

LH fakes wide to outside.

**Diag. 19, 27 With Fake Smash by FB in 2 hole.**

LE checks DRT two counts and goes for S.

RH steps straight ahead with left foot and then runs right through 7 hole behind RG, and turns in on LBU with right shoulder and hip.

FB fakes smash in 2 hole.

QB drops left foot back and faces left for fake to FB. He then shuffles left foot and steps with right to hand off to LH.

LH squats, elbows in, then starts with lead step for hand-off from QB. He starts angling toward hole on third step.

**Diag. 20, 27 Play Against 5-3-2-1.**

In accordance with logical pattern, LE now blocks RBU, since off-side end never passes up a BU in front of him on a 5-3.

Guards now release, instead of LT and C, because of position of defensive linemen in their area.

Fake of FB and step forward by RH make left shoulder block of RT effective.

RE steps with right foot and contacts DLE with left shoulder and left hip, forcing him outside with drive off planted right leg and whip with left.

RH leads play through 7 hole and takes LBU in with left shoulder if BU is in normal position in hole. If BU is pulled inside by fake, RH uses right shoulder with head across to pin him in.

LH squats and angles in hole after starting laterally and receiving ball from QB.

**Diag. 21, 47 QB Flick to RH With LH Flanker Against Normal 6-2-2-1.**

LH bluffs DLE with L shoulder, slips and goes for DLH.

FB fakes to outside, reaching for ball.

RH squats with feet in place a fraction of a count, then starts directly at 7 hole starting with L foot and taking ball on second step.

QB flicks ball laterally with wrist snap over right knee after stamping right foot, floating ball at hip level.

Pressure of LH bluffing DLE and fake of FB wide, keep E outside and out of play.

**Diag. 22, 41 Smash (goes with 27 cut back and 37 slant).**

LE checks DRT two counts with left shoulder and releases on DRH.

RE checks DLT one count and releases on S.

RHB dives at 1 hole, starting with left foot.

FB slants at 5 hole and picks up DLT with right shoulder.

LHB fakes wide to right starting with left foot, goes laterally and then bellies back, reaching for ball.

QB plants right foot and takes short left step, hands off to RHB, and fakes hand-off to FB and pitch-out to LHB.

**Diag. 23, 41 Smash Against 5-3-2-1.** LG or RG work on DG over center if he is hanging over on their side after C's left shoulder block. If he is not threatening play through their area, they continue head on into middle BU.

LHB goes in motion to pull DLE and LBU out of play.

Other backs same as against 6-man line.

**Diag. 24, 31 Power Buck Against 6-2-2-1.**

E's release down and out on DHB's. T's drive BU's out with outside shoulder.

RH bellies to left.

LH squats, then goes laterally to right. Action of HB's keeps defensive tackles and ends wide and out of play.

FB powers into 1 hole fast.

QB stamps right foot and twists to right with short left step for hand-off. He then floats off and fakes a pass.

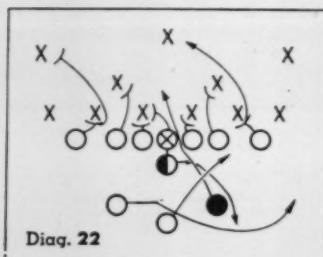
**Diag. 25, 22 Wedge Smash.**

LG forms apex of wedge. He drives straight ahead with elbows outstretched and hands on chest.

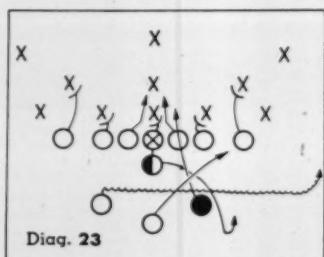
LT and C fit near elbows firmly behind guards and raise outside elbows for LE and RG to do likewise. RE fits in with RG when QB says "set" and line moves in fairly tight. All linemen except RG step off with inside foot so as to create a solid screen. They drive straight down field with powerful leg drive, forcing defensive linemen back. A solid wedge prevents backer-ups from infiltrating.

RE seals gap inside, one count, then releases down middle, taking first defensive man that crosses his path.

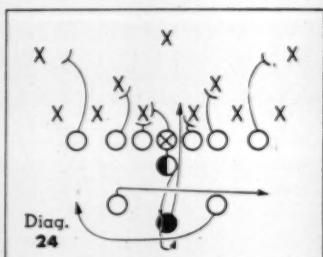
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Diag. 22



Diag. 23

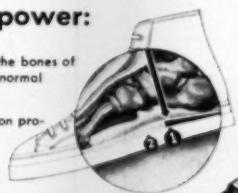


Diag. 24

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**FREE!** "Basketball Hints" booklet by Coach "Ozzie" Cowles, University of Michigan 1948 ("Big 9" Champions), University of Minnesota 1949-1950. Diagrams, winning plays, training rules . . . help for every player. Also **FREE**—Basketball Foul Shooting Record Charts. Write today! Athletic Dept., P. O. Box 327, Watertown 72, Mass.

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RHB bellies right to freeze on that side.

LHB goes in motion right to pull left side of defensive line over.

FB squats for delay to permit wedge to form, then hammers into hole.

QB stamps left foot and twists left with short right step, handing ball off with right hand under. He then fakes a pass.

Diag. 26, 27 Double Team Off Tackle with FB as Flanker.

LG pulls with lead step and swings through hole head-on into LBU. Longer run of LG and lack of an inside fake by a back make this type of block mandatory, as BU is usually near hole when LG turns into it.

RT and RE double team DLT in.

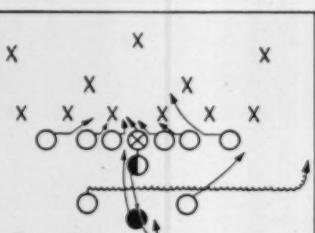
FB sets up 1 yd. outside and 1 yd. back of RE. He steps up with left foot to get proper angle and contacts DLE with right shoulder.

RHB smashes straight at DLE, contacts him with left shoulder, and assists FB in digging him outside.

LHB steps up with left foot and goes laterally to right. After receiving ball on left hip, he slants into 7 hole with a maximum of drive.

QB takes two steps right, starting with a right lead, then starts back with right and hands off to LHB with left hand under ball. QB continues on back to bluff pass.

This is a sure short gainer.



Diag. 25, 27 Play With LG Trapping Out and Flanker Taking LBU.

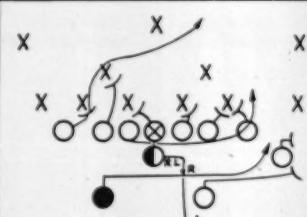
If LBU is causing LG too much trouble on first version of smash, flanker switches assignments with him and drives LBU inside with left shoulder.

LG into DLE with right shoulder.

### QUARTERBACK SKILLS

The quarterback keeps his right hand up—fingers extended with palm down and well back—just barely under the center's crotch. The top of the hand exerts a pressure against the crotch. The left thumb is a bit back from the right thumb, with the left hand being to the rear and side of the right. The fingers are extended down, forming a cup for the ball.

The center must keep the lace of the ball up and twist the ball slightly to the left as he snaps it to the



Diag. 26

quarter. A proper snap will fit the lace into the receiver's fingertips properly set for passing without further adjustment.

The quarter pulls the ball against his belt buckle and keeps it hidden there unless handing off or faking. On dive plays, the halfbacks form a pocket on the near hip on the first step. By starting with the inside foot, they receive the ball on the second step with the inside leg back.

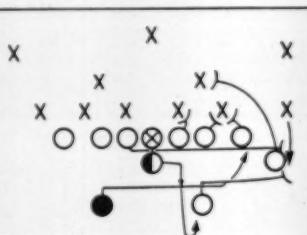
The inside hand is against the side of the near hip, palm up, while the opposite hand is well across the body against the stomach, palm down. The half looks the ball into the pocket, then looks up, whether he is faking or actually receiving the ball.

The quarter keeps the hand nearest the line of scrimmage under the ball, holding the ball toward the end. The underneath hand leaves the ball last. As the half receives the ball, he squeezes it with both hands. If faking, he clasps hands.

The quarter never gives an empty hand on a fake. He actually pushes the ball into the pocket, then withdraws it.

When there is cross-blocking in the line, the halfback jab-steps in place to compensate for the slight delay in the opening. On delayed backs, they squat in place and then go.

When using the step out, the quarter takes two steps in handing off or faking a dive, starting with a lead step with the near foot. In pitching out or faking to the wide halfback, he uses a hitch step for his third step.



Diag. 27

First of a series of educational posters sponsored by Planters Nut & Chocolate Co. for the 2,500,000 high school students who read Scholastic Magazines regularly.



**don't  
say  
"pitcher"**



**when you mean  
"picture"**

And don't say anything but PLANTERS PEANUTS when looking for a tasty energy treat that will restore lost pep and keep you going until the dinner bell. PLANTERS PEANUTS or the PLANTERS JUMBO BLOCK are the biggest, tastiest treats on the health counter. They contain a bigger percentage of protein than steak and are also extremely rich in vitamins B-1 and G. That spells E-x-t-r-a E-n-e-r-g-y. Try them and see for yourself.



PLEASE POST ON YOUR BULLETIN BOARD

# FOOTBALL OFFICIALS' SIGNALS



**TIME-OUT**  
Hands rapidly  
criss-crossed  
overhead



**SAFETY**  
Palms together  
overhead



**ILLEGAL MOTION  
or FORMATION  
AT SNAP**  
Horizontal arc  
with either hand



**OFFSIDE or VIOLATION  
OF FREE-KICK RULES**  
Hands on hips



**HOLDING**  
Grasping of one wrist  
Illegal use of hands or  
arms — same signal fol-  
lowed by interference  
signal



**PERSONAL FOUL**  
Extend right arm to side, palm  
down and move up and down

**CLIPPING**  
Slap back of knee

**ROUGHING KICKER**  
Swing leg



**ILLEGAL FORWARD  
PASS**  
Waving hands behind  
back

Intentional grounding of pass  
—Same signal followed by  
raised hand flung downward



**CRAWLING, PUSHING  
or HELPING RUNNER**  
Pushing movement of hands  
to front arms downward



**TOUCHDOWN or  
FIELD GOAL**  
Both arms aloft,  
held rigid



**INTERFERENCE WITH  
FAIR CATCH or  
FORWARD PASS**  
Pushing hands forward from  
shoulder hands vertical



**DELAY OF GAME  
or EXCESS  
TIME-OUT**  
Arms folded



**INCOMPLETE FORWARD PASS;  
PENALTY DECLINED; NO PLAY or  
NO SCORE**  
Hands rapidly criss-crossed  
in horizontal plane

Taken From National Federation Football Code

Presented with the compliments of

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**PLANTERS PEANUTS**

*is the signal for  
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## New Films

 A NEW 16-mm. sound film, *Football Kicking Techniques*, featuring Ken Strong, one of the greatest kickers of all time, has just been made available and should prove an invaluable aid to all coaches in the teaching of kicking fundamentals.

The film, which runs 20 minutes, covers almost every aspect of kicking in great detail by means of slow motion and animation. Clearly presented are all the fundamentals of punting and place kicking.

The famous ex-NYU All-American and pro star demonstrates the skills involved in holding the ball, aiming the ball, meeting it on the foot, adjusting the elevation of ball to trajectory in flight, follow through, measuring off the kicking steps, kicking a spiral, kicking an end-over-end, effect of kicking ball correctly—too high—and too low, proper lacing of shoes, and simple kicking exercises.

The film is available for rental or sale through Audio Film Center, 45 W. 45th St., New York, N. Y., and through their offices in Chicago and San Francisco.

 DESIGNED to introduce basketball to beginning students in the upper elementary and junior high school grades, *Let's Play Basketball* employs a game situation as a background against which to demonstrate the common fouls and violations and the basic fundamentals.

The first part of the film deals with the rules of the game. The players are introduced and their positions indicated. The game begins and the players demonstrate the common violations and fouls, repeating them in slow motion to make certain that they are clearly understood.

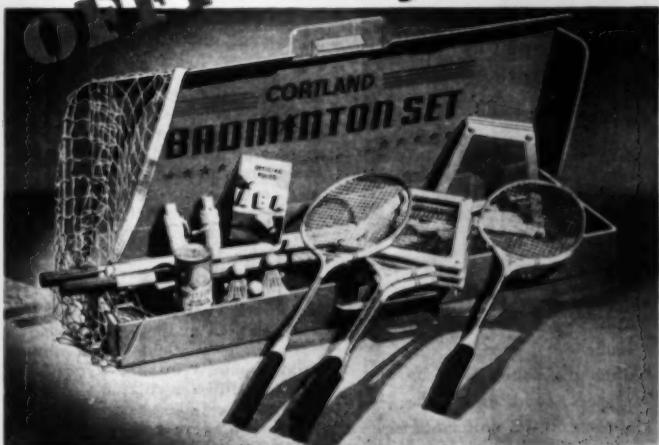
The second part of the film demonstrates the fundamental skills of the game. Through the use of both regular and slow motion, the audience learns how to dribble, how to catch the ball, how to pass it, and how to shoot.

The film ends with an appeal for good sportsmanship in playing the game.

This picture is a black-and-white job, approximately one and a half reels with a running time of about 15 minutes. For further information, write to Bailey Films, Inc., 2044 North Berendo, Hollywood 27, Calif.

## Badminton Sets

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## Standard Layout for

# Football Lighting



THE first step in planning a lighting installation is the determination of the class of play applicable to the area under consideration. The services of an architect, engineer, or electrical contractor will be helpful in adapting the standard layouts to local conditions, taking into consideration such factors as the size of the playing area, the location and size of the stands, obstructions, boundaries and locations available for poles.

The **pole locations** and **minimum heights** shown in this layout have been carefully calculated to provide good, comfortable seeing conditions for both players and spectators.

Where area limitations, obstructions, or other local conditions require modifications in the pole arrangement, care should be exercised to maintain the quality as well as the quantity of the light provided. It should be noted that the mounting heights specified are minimums, and any appreciable reduction will introduce the danger of glare for either players or spectators, or both.

The layouts are based upon the use of equipment having specific photometric characteristics and the ability to withstand the rigorous conditions of outdoor service. The "Group" and "Type" classifications used in the layouts are defined as follows:

**Group B:** General-Purpose Enclosed, 17-inch diameter and over.

**Group C:** Open-Type Porcelain Enamelled, without auxiliary reflector insert.

**Group D:** Open-Type Porcelain Enamelled, with auxiliary reflector insert.

Type	Beam Spread (degrees)
1	10 to less than 18
2	18 to less than 29
3	29 to less than 46
4	46 to less than 70
5	70 to less than 100
6	100 and up

The "Type" classification of the floodlights is based on beam spread, as indicated. This characteristic is as important as the number, size, and location of floodlights in achieving the desired light distribution.

Where several floodlights are mounted on a single pole, however,

a combination of units having wider and narrower beams than that specified may be used if the resulting average spread is the same.

Most layouts specify the use of 1500-watt lamps, since this provides maximum illumination with the fewest floodlights. It is recommended, on a number of layouts, that lamps be operated at 10% over their rated voltage. This results in a 35% increase in light output with a 16% increase in power consumed, and reduces the estimated lamp life from 1,000 to 300 hours.

The increase in light output permits the use of fewer floodlights. Operation at 5% overvoltage increases light output 18% and energy consumption 8%, and reduces rated lamp life to 500 hours.

In general, operation at 10% overvoltage should prove economical when lamps are in use 200 hours or less per year, and 5% overvoltage operation when annual use is from 200 to 500 hours.

**Maintenance.** Continued satisfactory service from a floodlighting installation requires adequate maintenance, since lighting efficiency is seriously impaired by blackened lamps and dirt on transmitting and reflecting surfaces.

The following maintenance operations should be performed at the beginning of each season:

**T**HIS article is reprinted from the new booklet, "NEMA Standard Floodlight Layouts for Floodlighting Sports Areas," prepared by the Floodlighting Section of the NEMA as a supplement to "A Guide for Planning Facilities for Athletics, Recreation, Physical and Health Education." The book is magnificently prepared and contains layouts for 23 types of sports. For information on how to obtain a free copy, write to The Athletic Institute, 209 South State St., Chicago 4, Ill.

1. Clean floodlights thoroughly.
  2. Replace badly blackened lamps and those which have reached 75% of their expected life.
  3. Check all poles for loose flood-light mounting bolts.
  4. Check all wiring connections.
  5. Check poles, crossarms, and distribution panels for corrosion. Paint where needed.
  6. Check all safety features of your installation.

During the season, a regular inspection and cleaning schedule should be established. The frequency with which cleaning is required depends upon local atmospheric conditions, ranging from once a week or oftener in some industrial areas to once a month in localities where the air is relatively clean.

Ordinary soap and water will generally be the only cleaning agent needed. Where an encrusted deposit calls for stronger measures, it is suggested that the manufacturer of

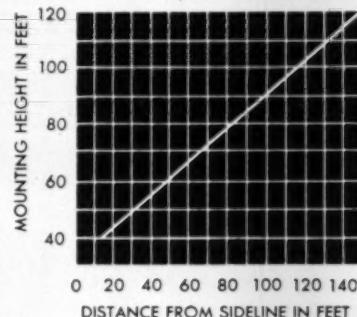


Chart showing minimum mounting height from field to bottom floodlight crossarm.

## CLASSIFICATION

It is generally conceded that distance between the spectators and the play is the first consideration in determining the class and lighting requirements. However, the potential seating capacity of the stands should also be considered.

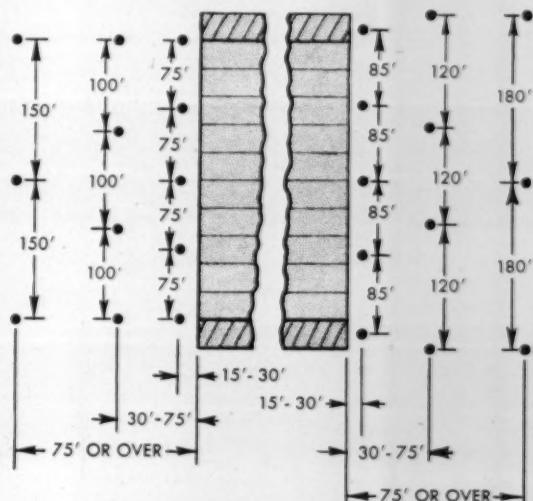
the lighting equipment be consulted.

Even when recommended maintenance procedures are followed, the output of floodlight will fall off somewhat between cleanings. To compensate for this loss in light output, the recommendations in the layouts are based on the application of a maintenance factor—75% for general-purpose enclosed floodlights, and 65% for open-type porcelain enameled floods.

These values have been shown by experience to provide the necessary

margin to assure satisfactory photometric performance under normal operating conditions.

NEMA standards are adopted in the public interest, and are designed to eliminate misunderstandings between the manufacturer and the purchaser, and to assist the purchaser in selecting and obtaining without delay the proper product for his particular need. The flood-lighting layouts represent the pooling of years of experience with actual installations.



Either of the above pole plans—or any intermediate longitudinal spacings—are considered good practice, with local field conditions dictating the exact pole locations.

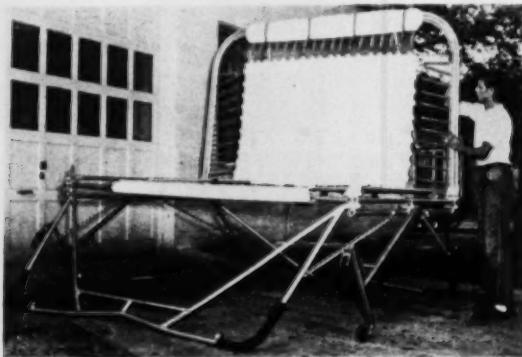
Class	Distance—Nearest Sideline to Farthest Row of Spectators	Spectator Seating Capacity
I	Over 100'	Over 30,000 spectators
II	50'-100'	10,000-30,000
III	30'-50'	5,000-10,000
IV	Under 30'	5,000
V	No fixed seating facilities	

Class	Distance—Nearest Sideline to Floodlight Poles	No. of Poles	Floodlights				Total Load (KW) *
			Type	Group	No. per Pole	Total No.	
I	Over 140'	6	1 or 2	B	90	540	940
	100'-140'	6	2 or 3	B	80	480	835
II	75'-100'	6	3	B	36	216	380
	50'- 75'	8	3	B	24	192	335
III	30'- 50'	8	4	B	16	128	225
IV	15'- 30'	10	5	B	8	80	140
	15'- 30'	10	6	D	12	120	210
	15'- 30'	10	6	C	18	180	315
V	15'- 30'	10	5	B	4	40	70
	15'- 30'	10	6	D	6	60	105
	15'- 30'	10	6	C	8	80	140

\*At 105% rated voltage

# NEW EQUIPMENT

As a service to its readers, Scholastic Coach offers this periodic round-up of new sports equipment items. For further information write to: Scholastic Coach, New Equipment Department, 7 East 12 St., New York 3, N. Y.



● **MARKING PASTE.** A United Labs. product, this paste is thinned with water and applied to athletic fields by any standard marking machine. It covers the grass blades from the tip to the ground, adheres well, and will not dust. It is in no way harmful to the grass and is unaffected by weather. Unusually long lasting.



● **FLASHFOLD TRAMPOLINE.** The new Nissen tramp is an all-steel heavy duty job which can be folded and moved in a flash, thanks to its quickly detachable dollies. One man folds it, one minute does it. Boasts a larger canvas than ordinary models and is made mostly of high-grade tubular steel. The most modern advance yet in trampoline evolution, this model meets the need for a tramp that combines flashfold features with heavy duty performance.



● **CUSTOM BUILT RUBBER BALLS.** Designed for game and tournament play, the Voit Rubber Corp. "X" series balls (basketball, football, soccerball, volleyball) are top-quality items custom built to the Voit rubber bladder-multiple ply fabric lining-rubber cover formula.



● **ALUMINUM FLOODLIGHT.** At the Third International Lighting Exposition, the Revere Electric Mfg. Co. had four constant streams of water pouring on an enclosed #4200 Alzak aluminum 1500-watt floodlight for the entire duration of the show. This unit took a terrific beating and proved that, irrespective of the height of the pole or tower, this fixture can stand all kinds of weather without endangering the life of the lamp.



● **PERSONALIZED SPORT OSCARS.** The Regal Awards Co. are now featuring a completely revised line with much more detail and a size increase to 6½ in. in height. The new additions are a series of cups, larger trophy bases, and many new practical awards and figures. The gold-inscribed nameplates effect a substantial saving over the conventional method of engraving. Delivery made in five days.

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**PORTABLE  
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## Cross-Country Running

(Continued from page 20)

numerous injuries and assurance of maximum performance. The main idea behind the warm-up is the adjustment of the physical system of heart, lungs, and muscle structure to the higher level of locomotion involved in the work-out or race.

It is absolutely necessary to ready the body to perform in the manner that it will be called upon to perform in competition. A set rule on warm-ups should be that the runner run as hard in the latter part of his warm-up as he will have to run at any time during the race.

In the 15 to 30 minute warm-up period which precedes each workout, special emphasis should be placed on developing the muscular strength and endurance of the shoulder, arms, and stomach, as proper conditioning in these areas is a vital factor in successful running.

As to the teaching of correct running form, a coach should be aware that it is best not to change a runner's natural habits unless there are stark irregularities which interfere with mechanical efficiency. The coach should cultivate efficient running form in practice so that it becomes a natural reaction in competition.

In the development of efficient form, the runner must strive to develop as near-perfect technique as possible. Efficient running form involves five elements, namely, proper body lean, correct use of arms, proper planting of the feet, correct head position, and precise general body alignment.

### PROPER BODY LEAN

The proper body lean for distance running is from 5 to 10 degrees forward, from the hips. Failure to use arms properly is a common fault of runners, especially beginners. Many do not use their arms enough, and some use them badly by swinging them across the chest instead of almost directly forward and backward.

Correct use of the arms involves a swing from the shoulders with the forearms almost parallel to the ground in the region of the hips. The elbows are bent at approximately 90° while the thumbs are up with the fingers loosely clasped. While running, the arms coordinate rhythmically with the legs and are driven forward only during the sprint finish and the driving start.

One should emphasize that in planting the feet, the runner should not land flat-footed or be up on his toes except when he is sprinting. The foot is planted straight ahead (not slue-footed or pigeon-toed) and a heel landing is made with a rocking from heel to toe.

The drive is made off the rear foot in the stride, but not too early or the

energy will be directed upward rather than forward. It should be stressed to the runners that in the backward kick of the legs the heels are kept as close to the horizontal as possible, as all this movement is lost motion and energy.

A natural position of the head at all times parallel to the ground (erect) is an important consideration of efficient running form. Drawing in the chin will result in too much forward lean, while throwing the head back, especially in the sprinting finish, reduces the stride and produces a general body tenseness.

#### BODY ALIGNMENT

In considering a precise general body alignment, it must be remembered that the body should be inclined slightly forward with the head parallel to the ground and the eyes looking about ten feet ahead on the ground surface. The athlete should run with a low, more or less shifting gait, with the feet just skimming the ground.

Unnecessary movements represent wasted effort; and inasmuch as the momentum to be carried is always forward (shoulders, arms, hips, knees, and feet), any side motion such as cross-swinging of arms or legs is a sign of poor form.

Besides form, the coach must develop in the daily work-out, rhythm, endurance, pace judgment and speed; the last three factors constituting the core of a distance running training program.<sup>4</sup>

Rhythm may be defined as the development of close coordination between the runner's arms, legs, and breathing functions.

According to T. E. Jones, track coach at the University of Wisconsin, the body, in good distance running form, is carried almost vertical with the forearm at a 90° angle; the hands are kept close to the body and the elbows are pointed outward; the shoulders are braced back, bearing the weight of the arms and allowing the lungs full freedom. A heel landing is made with a rocking from heel to toe, when the foot meets the ground. It emphasizes an easy knee movement and a swinging hip action with the rear heel kept at the same level as the knee.

"Endurance is an adjustment on the part of the human body in which the onset of fatigue, caused by participation in physical activity, is delayed."<sup>5</sup>

Pace judgment may be considered to be the runner's awareness of the approximate rate of motion at which he is running.<sup>6</sup>

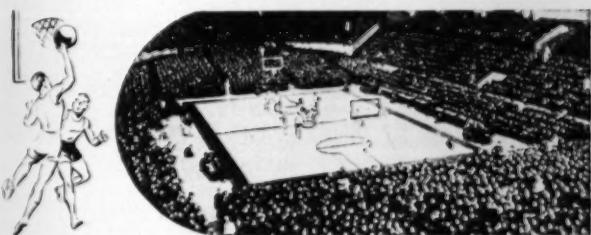
Speed, according to Ford Hess, coach of cross-country at Slippery Rock State Teachers College, Pa., is the term applied to "a type of muscular effort wherein large amounts of work are

<sup>4</sup>Ford A. Hess, "The Teaching of Rhythm to Distance Runners," *Athletic Journal*, May, 1942, p. 14.

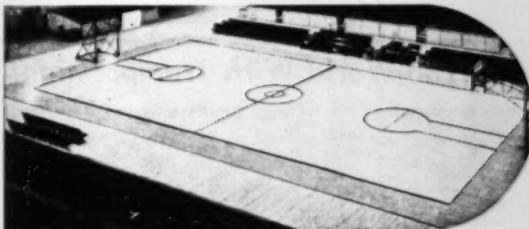
<sup>5</sup>Bowman Hall, "Training for Middle Distance Runners," *Scholastic Coach*, March, 1938, p. 8.

<sup>6</sup>Karl A. Schlademan, *Lectures Track Coaching*, P. E. 490 Michigan State College, June, 1941.

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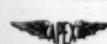
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accomplished in a relatively short time."

Besides a consistent daily work-out the coach must carefully plan a week's work-out schedule. The following is a suggested pattern for a high school team training for meets which will be run over a distance of three miles.

The first two or three weeks should be devoted to easy overdistance running. The first week's workout should cover the distance by alternate running and walking. No sprinting should be allowed as there is great danger of shin splints.

The main objectives to be accomplished during these first three weeks of training are:

1. The development of sufficient endurance so that each boy can run at least three miles without stopping.

2. The development of proper running form.

The following is a day-by-day work-out schedule for a high school team having its competition on Saturday. The times given must be adjusted to the individual runners, since a coach must always keep in mind the psychology of accomplishment, that is, keeping all assignments within the runner's reach.

#### MONDAY

Cover by jogging, 4 to 5 miles. The pace is varied each half mile by leaders selected by the coach. At the midpoint of each mile, the group runs a

**THIS** is the second of two articles on cross-country by Earl G. Watson, cross-country and track coach at the U. of Buffalo. The first installment (last month) dealt largely with the organization of a high school program. The current article stresses the actual coaching of the sport.

wind sprint. (Wind Sprint—start out at a slow jog, gradually increasing speed until top speed is reached at about 300 to 330 yards. Slow down gradually until back at the slow jog by the 660 yard mark.) This running should be done over some rolling hills, if it is at all possible.

Upon completion of this, and after a 10 to 15 minute rest during which the runners put on their sweat clothes and walk around, the following work-out should be given on the track:

1. A quarter of a mile in 70 to 75 sec.
2. Walk a quarter of a mile.
3. Run three or four 110's; the first one in about 17 sec.
4. Make an effort to increase the pace for each succeeding dash.

Emphasis in these sprints should be on a driving start with full use of the arms.

#### TUESDAY

This is a split workout with all boys running two separate  $1\frac{1}{2}$  miles. In the first, the aim is for a 5:45 at the mile and a total time of 8:35 to 8:40. In the second, the aim is for a 5:30 at the mile and a total time of 8:10 to 8:20. These are run on the course, not on the track. Between each of these runs, the boys should rest from five to ten minutes with his sweat suit on, moving and on his feet. The recovery period can be cut in half by having the runner get into his sweat suit immediately after a work-out or race and walking until respiration returns to normal. Following the second mile and a half, a five minute rest is taken and then the runners stride through two half-speed 220's on the track.

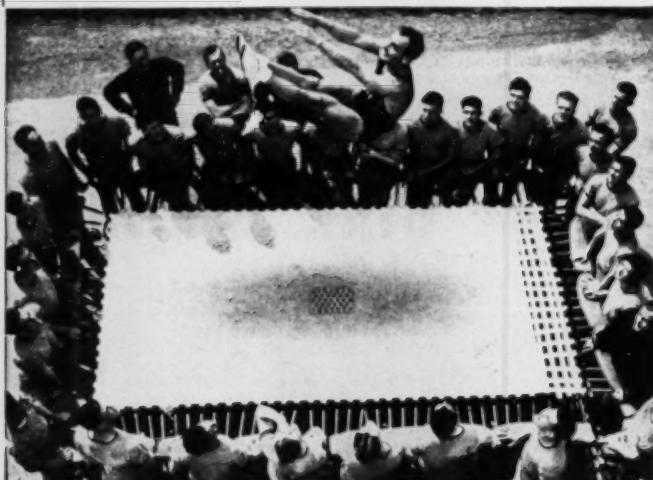
#### WEDNESDAY

This workout could be given on the track. It consists of a paced mile of 5:30 with the runners continuing on for another mile at from half to three-quarters speed. This is to be followed by four 110's with the first one in about 16 seconds. Make an effort to increase the pace for each succeeding dash. Emphasis in these sprints should be on a driving start with full use of the arms.

#### THURSDAY

The team should jog from three to four miles at half to three-quarters speed. After a five minute rest, two or three quarter miles should be run in 60 to 65 seconds. Walk a quarter of a mile after the first timed quar-

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ter and walk a half mile after the second timed quarter.

#### FRIDAY

This should be a day of rest, or, at most, a light workout, depending on the condition of the runners. Whether or not there is a workout, there should be a team meeting at which time the coach gives such instructions as: Avoidance of over-eating on Friday night (the two or three meals preceding the meet are most important); what should be eaten 4 to 5 hours previous to the meet; and the reminder to stay off the feet as much as possible prior to the meet. If a workout is given, it should be nothing more than jogging a mile or two, light calisthenics, and one or two easy 110's.

#### SATURDAY

On the day of the meet, the coach and his team should arrive one or two hours ahead of the scheduled start, if the meet is away from home. At home meets, he should assemble his team at least an hour prior to the starting time. On a course which is new to the team, they should, with the coach, walk over the entire course, observing all turns and unusual terrain.

Following are some of the more pertinent instructions which should be given to the runners before they go out to do their calisthenics, which should be only stretching and twisting (there should be no push-ups, leg lifts, or knee bends as they tend to tighten up the muscles):

1. Get off the starting mark fast!
2. Get out in front and make your opponents come up to meet you.
3. Hang on to an opponent if he passes you.
4. Cross-country is a team sport, so try to stay bunched.
5. Pour it on at the finish!

The coach must remember that the weekly workout schedule must not remain constant. It must be varied. Never let the runners get the idea that each Tuesday it is this and each Thursday that. As the coach gets to know his team and his runners, he will learn where the particular weaknesses are—rhythm, form, endurance, pace-judgment, or speed.

During the first two or three weeks, the runners should be urged to take deep inhalations as they walk, not so much to increase the lung capacity as to stretch the rib muscles and the diaphragm.

If meets are not run on weekends, all runners should be advised to walk from five to ten miles on either Saturday or Sunday. Regardless of when the competitive meets are run, this walk should be taken by all runners every week.

Unless the runner is fully aware that training is an off as well as on the field proposition, all the efforts of the coach in the daily conditioning period will go for naught. Cross-country running is not a contact sport, but it demands as much stamina, will-to-win, and courage as any other form of athletics.

The following are suggestions which will make for more enjoyable, more efficient coaching.

1. Be acquainted with any state regulations on distance running for high school boys.
2. Demand a physical examination of all participants.
3. Have a six-week training period before competition.
4. Have an easy, as well as pretty course.
5. Have regular practice and conditioning work.
6. Help each runner to enjoy and appreciate his associates.
7. Do not permit the practice to become strenuous.
8. Do not have winning as the only goal.
9. Keep attractive posters around the locker room. They tend to

create enthusiasm among the runners and enable the coach to pass along valuable training suggestions. Any amount of ingenuity can be used to make these posters both eye-catching and purposeful.

Cross-country is a truly American sport and, when scientifically conducted, is not the least bit injurious to the health of the participants. On the contrary, it promotes the general health, stimulates the circulatory and respiratory systems, improves muscle tone, and increases the life span.

Given the same break as basketball, football, or track, it can prove invaluable in helping fulfill one of the chief objectives of physical education, namely, the promotion of good health in the schools.

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# Athletes vs. Scholars



EVER since the interscholastic athletic program attained its present stature, unusual interest has been manifested in the scholarship of the participating group.

Many school men honestly believe that it is impossible for a boy to engage in athletics and still do justice by his studies. This opinion is not shared by the vast majority of administrators. But with the exception of a few related surveys, little statistical evidence is available to support their side.

It was with this thought in mind that the accompanying study was undertaken. Its specific purpose was to determine whether participation in organized interscholastic athletics had any effect on academic achievement.

The high school at Franklin, N. J., was used as a laboratory and the ten-year period between 1939 and 1948 was selected for analysis. The years of 1943 and 1944 were not included because Franklin had no varsity teams in these years due to the war restrictions on transportation.

Earlier studies in this field include those of Cook and Thompson<sup>1</sup> in 1928, Finch<sup>2</sup> in 1932, and Eaton and Shannon<sup>3</sup> in 1934. These undoubtedly are the best.

Cook and Thompson compared 91 letter men with 100 non-letter men in the Hughes High School in Cincinnati. They found that the athletes were slightly lower in scholarship, made poorer records during participation, remained longer in school, were more likely to graduate, and were more likely to enter college than non-athletes.

Finch collected data from the scholarship records of 174 boys who were graduated from the University High School, University of Minne-

<sup>1</sup>William A. Cook and Mabel Thompson, "A Comparison of Letter Boys and Non-Letter Boys in City High School," *School Review*, XXXVI (May, 1928), 350-58.

<sup>2</sup>H. Finch, "Athletics and Achievement in High School," *School and Society*, XXXV (February 27, 1932), 299-300.

<sup>3</sup>Dorothy Eaton and J. R. Shannon, "College Careers of High School Athletes and Non-Athletes," *School Review*, XLII (May, 1934), 356-61.

By REG PURDY

sota, over a seven-year period ending June, 1931. A thorough statistical treatment showed no significant difference in academic achievement between the two groups.

Eaton and Shannon compared high school athletes as a group with high school non-athletes according to marks received in college. These writers found a significant difference in achievement in favor of the non-athletes.

The data in the Franklin study were gathered by establishing a scholastic index. This is a figure which represents all the scholastic grades received by a boy for 2½ years—10th grade, 11th grade, and the first half of the 12th grade.

Each academic grade was given a numerical value: A—5, B—4, C—3, D—2, E—1. Then the numerical

TABLE I  
Scholastic Index for boys attending Franklin High School from 1939 to 1948.

	No.	Average Scholastic Index
Total Boys	295	3.20
Athletes	98	3.29
Non-Athletes	187	3.12
Members, Football Squad	76	3.24
Members, Basketball Squad	46	3.35
Members, Baseball Squad	50	3.49
Boys playing 1 Sport	51	3.18
Boys playing 2 Sports	20	3.46
Boys playing 3 Sports	27	3.47

TABLE II  
Number of boys who entered college from Franklin High School—1939 to 1948.

	No.	Athletes	No.	Non-Athletes
1939	9	4	22	5
1940	14	3	18	4
1941	9	5	30	6
1942	16	4	29	7
1945	9	5	25	6
1946	14	5	15	5
1947	10	5	21	4
1948	17	5	27	6
	98	36	187	43
		37%		23%

value of the grade was multiplied by the number of credits given for that subject. Each subject was treated in this way.

Next the total credits were divided into the sum of credits times grade values. All subjects taken during the 2½ years were evaluated, so that the totals for each year and the half year were added and divided by 2½.

Example:

Subject	Acad. Credit	Grade	Num. Val.	Total
English	5	A	5	25
History	5	A	5	25
Math	5	A	5	25
Wood Shop	4	A	5	20
Phys Ed.	1	A	5	5

Since the subject received an A in each course, he wound up with an index of 5.0 (total score divided by total number of credits)—the highest possible index to achieve.

The boy with a B average would have had an index of 4.0 to 4.9; the C average would have been 3.0 to 3.9; D average 2.0 to 2.9; and an E average 1.0 to 1.9. All the averages hereafter presented were computed on this basis.

This is the Normative-Survey<sup>4</sup> method of research which is directed toward ascertaining the prevailing conditions. This direction of attention toward existing conditions does not, however, mean that the significance of normative-survey research is limited to the present. A study of the status of conditions at any given time may be repeated later, so that comparisons can be made, the direction of change noted and evaluated, and future growth guided.

Definition of terms: An "athlete" was defined as any male pupil in Grades X, XI, or XII who was a regular participant in practice with the varsity football, basketball, or baseball squads. The "non-athlete" was defined as any boy who had never been a member of any varsity squad.

The number of boys enrolled in

<sup>4</sup>Carter V. Good, A. S. Barr, and Douglas E. Scates, "The Methodology of Educational Research," Chapter II, *The Normative-Survey Method*, pp. 286-89. New York: The Century Co., 1935. Pp. 890.

the senior classes (12th Grade) at Franklin from 1939 to 1948 (not including 1943 and 1944) totaled 285. Of this number, 98, or 34%, were members of one or more varsity squads. This would indicate that about one out of every three boys was engaged in varsity athletics. The Scholastic Index for the 98 athletes was 3.2872 while that of the 187 non-athletes was 3.1178. This indicated that they both had a scholastic average slightly above a C. The grades at Franklin are figured on the following percentage basis: A—90 to 100; B—80 to 89; C—70 to 79; D—60 to 69; and E—below 60.

The mean is probably slightly lower than in many schools, perhaps because of the fact that Franklin is a mining town, with a comparatively smaller per cent going to college.

Over the ten-year period, the athletes had a higher scholastic rating than the non-athletes every year except two—1939 and 1948.

During the year 1945, the 9 boys engaged in varsity athletics had an average scholastic index of 4.0200 which is equivalent to a B.

#### BASEBALLERS TOP LIST

Additional statistics were compiled on the various sports themselves. It might be of passing interest to note that the boys playing baseball ranked highest with an index of 3.4895. Basketball players ranked second with 3.3505, leaving football in third place. It is interesting to note that the latter sport rated only 3.2367, which is only a fraction above the general average.

It seems logical to deduce that the slightly below average boy is more apt to be carried on a football squad (where nobody is cut), while baseball and basketball squads are smaller and select. These facts are merely amplifications of the study and have little bearing upon the final conclusions.

A further analysis was made by determining the scholastic averages of the boys who participated in only one sport, any two sports, and all three sports. The findings showed that those who were engaged in three sports had the highest scholastic index of 3.4714. Those taking part in any two sports ranked second with 3.4638, and the one-sport boys were third with 3.1819.

From this it seems reasonable to deduce that the amount of time spent in athletic activity had no effect on the scholastic grades of the participants.

The most significant difference in the entire study appears in the table

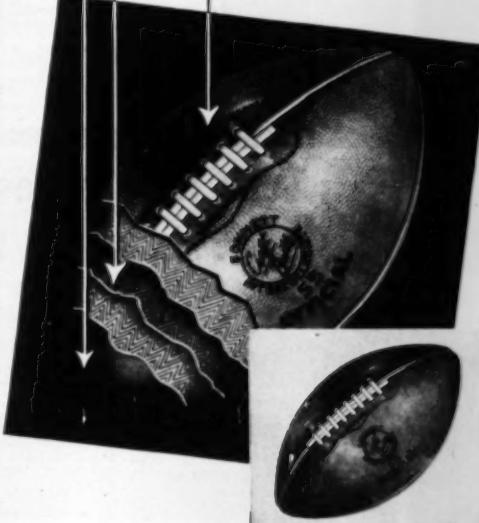
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showing the number of pupils who entered college. Among the 98 athletes, 36 went to college, against only 43 out of the 187 non-athletes. In terms of percentage, the athletes won out 37% to only 23% for the non-athlete.

It is true that a clever statistician can manipulate figures to make them prove almost anything. But in this instance the author entered the study with no predetermined conclusions to "prove." The approach was made with an open mind. However, since the study proved what it did, it is hoped that the actual statistical information will help further the cause of athletics wherever such assistance is needed.

The conclusions follow:

1. The fact that the grades of the athletes averaged 1.7 percentage points above the non-athletes proves that participation in athletics is no drawback scholastically; and that sports may actually serve as a stimulant to many who otherwise would neglect their studies. The scholastic eligibility requirements alone constitute a sharp-edged spur for the athlete.

2. The boy who participates in all three sports is more likely to be a better student than a boy who only

participates in one or two. This shows that additional time spent in athletic activity is not a drawback to scholastic achievement.

3. The athlete is more likely to enter college than the non-athlete.

4. Since practically all investigations of the effect of interscholastic athletics on scholarships have shown negligible results, it would seem to follow that the non-participant is the loser in experience.

It should be understood that this study was confined to one school in one section of the state and country. More definite conclusions, with more validity and reliability, could be determined by working on a larger scale.

**R**EG PURDY has been coaching three sports and teaching physical education at Franklin (N. J.) High School for the past 14 years. His research into the scholarship of athletes was undertaken as part of a graduate course given by Dr. Partridge at Montclair State Teachers College, and is being passed along as a stimulant to other schools in evaluating the scholarship of their athletes.

## Penetration Charge

(Continued from page 26)

get contact with his forearm and shoulder, at least, to the midline of the blocker. He should not be satisfied to merely hit the offensive man's side with his shoulder and forearm.

One of the nightmares of a hard-charging lineman, is the trap play. Here, again, fast reaction is necessary when the defensive man feels no pressure ahead of him. We use the standard reaction of dropping to a low, strong, balanced position, and facing in to meet the attack. However, it would seem that the main defense against the trap lies with quick reaction by linemen.

In our blocking drills for linemen, we try to combine work for defensive linemen. Frequently, we tip off one or two offensive linemen to pull out or brush their defensive opponents and we watch the defensive boys for speed of reaction. Boys who are slow in "smelling" the trap, are given extra work. However, it is wise to drill all linemen against traps both in individual offensive and defensive work and in offensive and defensive scrimmage.

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## Here Below

(Continued from page 5)

by Gil Dobie in his long reign over the Big Red of Cornell.

It is possible that the Kremlin may look with some degree of tolerance on simple variations of the single wing, provided the shift is to the left. The quick kick, a favorite instrument of Soviet diplomacy, will undoubtedly be encouraged, as will the end-around play, an application of the basic Communist principle of the end justifying the means.

On one point, namely the disposition of the line on offense, there is no room for doubt. The *Pravda* article clearly rules as follows: "On offense, in accordance with our program for the epoch of capitalist decline, the Communist Party line must be a balanced line."

With regard to the formation on defense, it is reliably reported that in recent sessions of the Politburo, Stalin himself has spoken up strongly for the 6-2-2-1.

A section of the *Pravda* article, devoted to the huddle, known in Soviet football as the Ecotsp (Emergency Commissariat for the Organization of the Ten-Second Plan), will prove especially interesting to American coaches. The article warns that since the huddle is in essence a secret assemblage, there is the danger that it might be used for remarks inimical to the interests of the Soviet state.

To prevent this, Comrade Beria rules as follows: That there be assigned to all football games, in addition to the regular officials, an Ecotsp Commissar who will listen in on all huddles and rule on the political correctness of the plays selected.

In the event a play is rejected by the Commissar for political reasons, the offending team will be penalized for "delaying the victorious advance of progressive forces everywhere." The penalty, left to the discretion of the Commissar, may vary from 15 yards to half the distance to Siberia.

American correspondents in Moscow, seeking comments on the *Pravda* article from football coaches in the vicinity of the city, were singularly unsuccessful. Only one coach, Lev Littlov, mentor of the Moscow City College eleven, was available for comment.

His statement follows: "We have a tough schedule this year. My kids are big, but they're young, green, politically untested. We'll be lucky to win a game."

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# Coaches' Corner

Please send all contributions to this column to Scholastic Coach, Coaches' Corner Dept., 7 East 12th St., New York 3, N. Y.

**H**UNK Anderson never was, and isn't exactly now, the mothering type of line coach. He and Knute Rockne made a delightful combination at Notre Dame. While Hunk would be giving the guards and tackles hell, Rock would be soothing the backs and ends on the other end of the field. When Rock was ready for some scrimmage, he would call, "Heartley, old chap, will you bring the behemoths over, if you don't mind?"

Hunk would go right on hounding and sweating the linemen. "Heartley," Knute would call again, "could we trouble you for the use of your monsters?" Still no answer, and Rock would call again, gentle as a lamb.

Finally Hunk would holler, "What the hell, Rock. Wait awhile. These guys ain't even bleedin' yet."

**E**ven when Herman Hickman has stayed up most of the night reciting poetry, his working day begins at 7 a.m. He likes to confer with his assistants then, and he insists on promptness. The first time he called a dawn conference at Yale, one of his aides was tardy.

"Gentlemen," quoth the Bard of Eli, "I might as well say now that there are only two excuses for anybody being late at these meetings. They are sickness or death."

His eyes lit on Stu Clancy, an assistant coach who also operates as an embalmer in Bradford, Conn. "I mean private," Herman said, "not professional deaths."

**A**ccustomed to public speaking since early boyhood, Hickman can handle banqueting alumni as easy as breaking sticks. He doesn't apologize for defeats. Blandly he assures Yale men that their team could have won a good deal oftener than it did last year, but he didn't want to set a standard that might be difficult to live up to.

His aim, he says, is to lose just often enough to "keep the alumni sullen, but not mutinous."

**A** Harvard man," Hickman would say if you pinned him down, "has sound ideas. He believes in the fatherhood of God, the brotherhood of man, and the neighborhood of Boston."

**T**here are practically no depths of evil into which Mr. Hickman won't

plunge if it'll help get results with a football team. "At Yale," he confesses, "I tell 'em 'Don't over-exert, boys. Just nice, easy work. Our aim is exercise that invigorates and refreshes but does not fatigue.' 'Hooray for Hickman,' the boys say, 'that Simon Legree of a backfield coach wants to kill us all.'

"You use up a lot of backfield coaches that way," Hickman says, "but it makes for a fine, happy spirit among the boys."

**C**redit for all these nuggets goes to that prince among sportswriters, Red Smith. The following Jack Lavelle story also appeared originally in the Smith sports corner. It seemed that Lavelle, football's most prodigious undercover operator, recently flew out for a look at the Green Bay Packers. The plane was late, so Jack decided to drop in for a quick snack at a hash joint suspected of serving horse meat.

"There's an inspector in the joint and I hear the proprietor arguing with him: 'Horse meat? Horse meat? I'll have you know we serve nothing but the finest grade AAA beef from big, beautiful black Angus steers.'

"Bring me a sample," the inspector says, and the guy comes back with a sizzling platter holding two gorgeous steaks.

"Wonderful," the inspector says. "I'll try one of 'em."

"You gotta eat both," the proprietor says.

"I can't eat both," the inspector

grumbles. "I ain't that hungry. I'll take one."

"You'll take two."

"I'll take one," the inspector says. "Why can't I have just one?"

"Can't split 'em," the proprietor says. "They're an entry."

**O**ne of the most refreshing things about Zeke Bonura, the worst fielding first baseman ever to decorate an infield, was his enthusiasm. He'd gleefully pound his mitt and shout encouragement to anyone who'd care to listen, whenever he made a good play or even when he didn't.

One day, with the bases full and two out, the batter dribbled a ball right toward Zeke. Big Zeke charged in and pounced on the ball. But it popped out of his glove. He picked it up, but it popped out again. Then he kicked it a bit, then bobbed it again. By the time he finally picked it up, three runners were in and the batter was racing to third. So Zeke promptly fired the ball into the opposite dugout. Result: Four runs on the "final out" of the inning.

Zeke went back to his position. "Thassaway in there," he shouted encouragingly to the pitcher, pounding his glove. "Atta boy. Stick in there, old kid. We'll win this one for you."

**S**tan Hack, the former Cub third sacker, had one of the best eyes in the game, yet he rarely complained about umpires' decisions. You have Umpire Bill Stewart's word for it. "I'll never forget one day when I



Laurence Reynolds in *Cottlers*

"Now just watch, soon's he gets his signal clear in his mind—boy!"

called a strike on Stan that could have been called either way. Hack grinned at me and asked what I had said, as if he didn't know.

"I repeated it was a strike. An injured expression crossed Hack's face. 'If you called it a strike, it's a strike,' he said. 'But don't ever forget, Bill, that I have the greatest confidence in you.'

**When it comes** to iron-man pitching stunts, Corky Corraeini of the Italian-American softball club of Kenosha, Wis., takes a back seat to nobody—not even to Dick Merriwell. On Aug. 15, Corky pitched and won a 42-inning game, 1-0. What's more, he singled in the winning run—just 4 hours and 10 minutes after the opening pitch.

**Did you see** that All-American eleven, embracing performers during the past quarter of a century, picked by Christy Walsh, the reformed ghost writer? Here it is: *Ends*—Hutson and Oosterbaan; *tackles*—Weir and Kinard; *guards*—Baker and Cannon; *center*—Wojciechowicz; *backs*—Lujack, Davis, Blanchard, and Grange.

This is a fair-to-middlin' club, no question about it. But we're willing to bet we could pick 11 guys who could whale the tar out of the Walsh team. Here is our 1925-1949 All-American: *Ends*—Hewitt and Fesler; *tackles*—Hubbard and Edwards; *guards*—Fortmann and Michalek; *center*—Turner; *backs*—Strong, Nevers, Gipp, and Baugh.

Final Score: Walsh U. 7; Scholastic Coach Normal 27. See you in the Rose Bowl.

**This man, John Lardner,** Ring's illustrious son, writes a mean column himself. Here's a sample from one of his recent stints in *Newsweek*:

Last year, toward the time of the Harvard-Yale football game, a couple of Harvard students challenged Herman Hickman, the prominent (280 pound) coach of the Yales, to an eating contest. Stung by Hickman's fame as a free-style grazer, they offered to meet him at a neutral trough, before or after the game, and eat right down the line with him, for a purse and side bets.

Naturally the coach ignored this callow proposition. Recognized in several states, especially Connecticut, Tennessee, and Virginia, as the world's champion trencherman, he felt it beneath his dignity to eat against children. Known far and wide as the Scourge of the Smokies, celebrated in two continents for his work in the fields of ham and fried chicken, Hickman deserves an opponent worthy of his mettle. And I think the opponent—and the occasion—are at hand.

A few days from now, Coach Hickman will lead a team of college all-stars in a football game with New York's professional Giants, coached by Steve (Carbarn) Owen, the well-known one-man group. Mr. Owen is said by connoisseurs to be the strongest hand with a knife and fork ever.

(Concluded on page 70)

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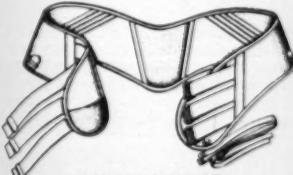
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# National Federation NEWS

Edited by H. V. PORTER



CIRCULATION of the basketball rules book will exceed that for any previous year. Due to the fine efforts of several of the states in promoting its use among member schools, the total number employed this year will come to about 100,000. Iowa alone uses 16,000 copies.

The book is more than a code of rules. Its supplement contains many aids for the coach, official, and contest manager. Among the many helpful articles are:

1. Detailed comments on the new rules changes.
2. A summary of statistics which have been gleaned throughout the land.
3. A condensed summary of the development of the rules.
4. Tables showing the type of tournament organization and the winners in each state.
5. Thought provokers for review purposes.
6. Convenient manuals for scorers and timers.

7. Information concerning equipment, summer athletic programs, and visual aids in sports.

**Basketball Case Book:** In addition to official interpretations, there are detailed comments on new rules provisions, sample test questions, and a good summary of officiating techniques.

**Basketball Player Handbook:** Published last year, this book is still up to date, except for the fact that it does not incorporate the new provisions concerning the more severe penalty applying during the last few minutes of the game.

**Basketball Meeting Folders:** This is a 12-page folder in two colors. The material is made up so that each of three four-page folders can be separated from the others. The first folder should prove helpful for distribution at the initial state-sponsored meeting, while the remaining folders can be distributed to local groups as a guide for the weekly meetings which follow the initial one.

**So Now You're An Official:** This book was published two years ago and is still up to date. It is a general treatment of the preparation and training of officials. It is recommended for presentation to every registered official or, in those states which have already made such distribution, to each newly registered man.

**Basketball Examination Test:** This is a comprehensive rules exam made up in two parts, each of which comprises a complete quiz.

Part I is designed primarily for use as a review. In many states, each

official is required to write Part I prior to the start of the season. In most cases, use of the Rules, Case Book, and other materials are permitted in the writing. Papers are graded at the state or district offices. For grading, a perforated key is available so that the answers may be checked in approximately one minute. The exam is made with answer sheet attached and only the answer sheet is sent in for correction.

Part II is used for testing and classification purposes and no state should permit general distribution of this prior to December 5. If the conditions in a given state are such as to require use before this date, all papers should be collected and the state office is obligated to set up its machinery in such a way as to void the possibility of distribution across state lines prior to the aforementioned date.

**Interpretation films.** The following films, produced under the sanction of the National Federation by the Official Sports Film Service, are available to school groups:

**King Football:** Definitions of football terms illustrated—player possession, dead ball, loose ball, muff, fumble and force—animation showing basic positions of officials and the 3-and-1 method of penalty enforcement—kicks—substitutions and time factors illustrated—backward and forward pass problems demonstrated in slow motion.

**Football Today:** Play situations illustrating football rules. The kick-off, followed by—violations of the snap—delay of game—rights of the kicker and receiver on punt formation—methods of substitution—types of fumbles, passes, and handed ball—protection for passer and kicker. Scenes are frozen suspending action to permit audience to follow official's decision.

**Football-By-The-Code:** Animation depicting football field markings—officials' basic positions and penalty enforcement—rights of offense and defense on backward passes—rules governing offensive lineman—fair catch—forward passing and batting the ball—situations illustrating safety and touchback.

**Basketball Today:** Demonstrations by skilled high school, college, and Olympic champion players—plays analyzed in slow motion—interpretation on center jump action—free-throw positions and violations—throw-in after goal—substitutions—ball out of bounds—personal fouls on player with and without ball—rights and limitations during dribble, pivot and feint.

**Basketball Up-To-Date:** Historical

background precedes interpretation of play situations. Rules governing center division line-held ball—the air dribble—jumper—palming the ball—procedures on out-of-bounds play when space is limited—action in the end zone—plus thrilling basketball action.

**Basketball-By-The-Code:** Officiating procedure at beginning of game, on free throws and held ball—correct method of substituting and of starting a dribble—overhead pass which touches the floor and air dribble—roughness caused by calling held ball too late—rights of a jumper—ball hits edge of backboard—rights and limitations on pivoting—responsibility during screens.

**Baseball Today:** Play situations demonstrating proper pitching procedure—rights and limitations of the catcher, basemen, fielders, batter, runner, and coaches. Correct rulings on the balk, interference by catcher, batter, runner, fielder, and infield flies.

These films are co-sponsored by General Mills and Wilson Sporting Goods Co. Any school which is a member of a State Association may book them by writing to its state executive office.

**Annual Meeting:** The National Federation annual meeting and meeting of the National Football Committee will be held at Santa Monica, Calif. (Chase Hotel), during the last week in December. Present plans call for the first general session on Wednesday night, December 28. Other sessions will be held on Thursday and Friday with the Football Committee meeting on Saturday, December 31 and probably Sunday morning, January 1.

Each individual will be required to make his own reservation. For the benefit of Federation delegates, the Santa Fe Railroad is reserving one or two pullman cars on the Grand Canyon train which leaves Chicago at noon Monday, December 26.

## Soccer Defense

(Continued from page 32)

on the block many of the scoring chances of his team; or shall he employ the older, higher scoring two-back defense and chance overcoming his opponent by sheer numbers of goals?

Certainly, I think, the choice is not clear-cut. But I would remind school coaches and club managers alike—all the world loves a goal. Crowds cheer, players prance, and referee and linesmen strut back into position as if they had had something to do with it—which, of course, they have.

Without doubt, offense has greater spectator appeal than defense. If there is a watchword, Ivan Sharpe has sounded it. "Safety first ideas are spoiling soccer."



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# Basketball Aptitude Tests



WHILE acceptable skill tests are available in almost every sport, there seems to be a need for a simple, practical, economic measure of basketball skills.

For the coach, especially in a large school, there is a definite need for an aid in screening candidates for the varsity and in cutting the squad.

For the physical educator, a test which could serve as a grading item, a motivator, or a measure of pupil achievement, would be of incalculable aid, not only in the teaching program but in segregating boys into more homogeneous groupings for basketball intramurals.

Coaches frequently ignore these tests because they do not take in the many intangibles involved in game situations. Most of these men prefer to weigh their boys subjectively through observation.

It would seem, however, that any sound, objective evidence should prove distinctly advantageous in supporting a subjective evaluation. The test scores might induce the coach to be more cautious, more patient, and more aware of heretofore unnoticed weaknesses.

In this particular study, an effort was made to establish a practical test for high school boys which would measure their physical aptitude for basketball. The eight items selected to comprise the original battery and the fundamental factors to which they were assumed or known to be related, shaped up as follows:

*Height* — shooting, ball-control and recovery.

*Baskets per minute* — ball-handling, speed, sensory-motor coordination.

*Forty-Foot Dash* — velocity, reaction time, motor agility.

*Vertical Jump* — velocity, agility, power.

*Burpee Motor Ability Test (10 seconds)* — motor ability.

*Dodging Run* — speed, motor agility, velocity.

*Free Throws (out of ten)* — shooting, sensory-motor coordination, motor ability.

*Wall Bounce (10 seconds)* — motor agility, sensory-motor coordination, velocity.

The following materials were necessary for the administration of the test: 1 stopwatch, 1 tape measure 50 feet, 1 basketball goal and backboard, 4 basketballs, 6 track hurdles, 1 jump and reach board (marked in inches), and other miscellaneous equipment such as chalk, pencils, paper, squad cards, etc.

Most of the equipment used was obtainable at the school studied, a few items were borrowed from the Department of Physical Education, Indiana University.

#### OBTAINING THE DATA

The events were conducted and scored in the following manner:

*Height*: Measured to the nearest inch with the subject wearing his regular basketball shoes.

*Baskets Per Minute*: The subject takes a position just behind the foul line, facing the basket. On the "go" from the scorer-timer, he proceeds to shoot as many baskets as he possibly can in one minute. He may shoot from any point on the floor or beneath the basket, but if he wishes to move closer after retrieving a ball he must dribble. The number of baskets made in one minute, comprises the final score.

*Forty-Foot Dash*: The subject takes an upright position behind the out-of-bounds line at the end of the floor. On the "go" from the scorer-timer, he runs the 40-foot course as fast as he can. Score is the elapsed time to the nearest tenth of a second from his start to the finish.

*Vertical Jump*: Student stands facing the jump-and-reach board which has been attached to the basketball backboard. With a short piece of chalk, he reaches up and makes a horizontal mark as high as he can on the board while still keeping both feet on the floor. He then turns 90° to the left or right so that his reaching hand is closest to the board; and jumps as high as he can. At the point of greatest height, he again reaches and makes a second horizontal mark on the

board. The vertical distance to the nearest half inch is measured between the reach mark and the jump mark. Each student is given three trials and the best distance recorded.

*Burpee Motor Ability Test (10 seconds):* Starting in the erect position, the subject comes to a full squat, from there he extends his feet backward coming to a front support, thence back to a full squat, and finally to the erect standing position. Each return to the erect standing position, counts one. For each partial position, one-fourth is counted. For example: If, when time is called, the student has returned to the squat position from the front support, but is not standing, he is given three-quarters of a credit. His score is the total number of complete movements and the fractional part, if any, which he is able to do in 10 seconds.

*Dodging Run:* The procedure is best stated in LaSalle's *Guidance of Children Through Physical Education*, page 272. The runner must go over the outlined course two times without stopping. The elapsed time to the nearest tenth of a second, represents his score. Only one attempt is allowed.

*Free Throws* (out of 10): The subject takes the regular position behind the free-throw line and shoots 10 successive shots in his own time. Score is the number of baskets made. Stepping over the line is a foul.

*Wall Bounce:* A target is painted on a smooth surfaced wall. The dimensions are two feet wide by four feet high, with the lower limit of the rectangle three feet above the floor. From a point six feet from the target, the individual (on "go") bounces the ball against the wall target and catches the rebound (without it touching the floor) as many times as possible in 10 seconds. The ball must hit the wall inside the borders of the target. Score is the number of times the ball is caught.

It was decided to give the test in regularly scheduled physical education periods, and the squad leaders were given special instructions in the manner of administering and scoring the test items.

The items were then given to the group over a three-day period utilizing a rotating squad method. The raw scores for each item were transferred from the squad card to the master record sheet and made ready for statistical treatment.

At the next meeting of the class after the testing had been completed, the members of the class were scheduled in intersquad bas-

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ketball games for the purpose of observation and rating by the jury. The subjects were also observed by this jury during two successive class periods in similar game situations.

The jury was composed of five senior (college) majors in physical education. Two of them were members of the varsity squad, two had played high school ball but had not made the varsity and were limited to intramurals. The fifth man was the student teacher working with the classes in which the tests were given.

After a first, second, and third observation, each member of the jury turned in a check list rating sheet which had been prepared to standardize the procedure involved in rating. This check list included passing, dribbling, footwork, faking, team play, eye-hand coordination, aggressiveness, competitive spirit, physical condition, speed, agility, and numerous other basic skills.

The player was rated on a scale from 1 to 5 points, with 5 being very good, 3 average, and 1 poor. The total ratings for all items were obtained and divided by the number of items for an average. Since each boy was rated three times by each member of the jury, his average was obtained and entered on the master record sheet.

Thus, each case had five average ratings submitted by the jury; these were totaled under the heading of Total Point Rating. With the subjective Total Point Ratings (maximum 25 points) and the test item raw scores recorded, the data was ready for statistical treatment.

The mean and standard deviations, along with other statistics, were computed from the frequency distributions of the raw scores for each of the eight items. The next step was the conversion of the raw scores to T-scale scores in each event, and then a summing up into an Eight Item Battery Total Score.

The subjective Total Point Ratings were correlated with the Eight Item Battery Scores and resulted in a .80 relationship.

#### ANALYSIS OF DATA

There was a bimodal distribution in Vertical Jump, Baskets Per Minute, Height, Forty-Foot Dash, Dodging Run and Burpee M.A.

Vertical Jump and the Forty-Foot Dash seemed to have velocity in common and have the highest intercorrelation.

Vertical Jump appears to have something in common with Dodging Run, Wall Bounce, and Baskets Per Minute not attributable to height, but possibly velocity.

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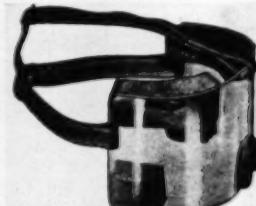
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Baskets Per Minute and Wall Bounce have the speed of ball-handling in common and also have the second highest intercorrelation.

Dodging Run and the Forty-Foot Dash have speed in common with the third highest intercorrelation.

Burpee and the Dodging Run seem to have a common factor in agility, and Free Throws have nothing in common with any of the events.

Leg speed seems to be a factor in the Dodging Run and Forty-Foot Dash; speed in ball-handling shows up in the Wall Bounce and Baskets Per Minute, while velocity or instant speed is apparent in Vertical Jump and Forty-Foot Dash.

Therefore, speed in general, seems to be a most important factor as evidenced by its appearance in Dodging Run, Forty-Foot Dash, Baskets Per Minute, and Wall Bounce.

In the analysis of the data, several points seem worthy of mention as aids in further study and as recommendations in the use of the batteries as outlined.

First, the Dodging Run could be given with the player traveling the prescribed course dribbling a basketball rather than just running.

Second, the Forty-Foot Dash might be increased to fifty in keeping with the increase in construction of high school basketball floors complying with the maximum official dimensions.

Third, some better means of classification might be employed, rather than just a grouping for skills test purposes by class alone.

#### CONCLUSIONS

It appears that the eight items originally selected to measure basketball skill are, as a battery, a valid measure when compared with the subjective rating of the cases by the jury (.80).

Correlations of the specific events with the eight item battery revealed five events which correlated .70 or better and which, when combined in a Five Item Battery correlate .968 with the original eight items.

Therefore, the Five Item Battery composed of Dodging Run, Forty-Foot Dash, Baskets Per Minute, Wall Bounce and Vertical Jump, is the recommended test battery.

However, either of the two batteries or any of the events individually can be readily adapted to numerous uses in the physical education program as a motivator, as a basis for achievement testing, as a skill diagnosis, as a means of classification for intramurals, and as a marking device on basketball skills.

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## New Books on the Sport Shelf

- MODERN FOOTBALL (Fundamentals and Strategy). By H. O. (Fritz) Crisler. Pp. 279. Illustrated—photographs and diagrams. New York: McGraw-Hill Book Co., Inc. \$3.75.

ONE of the greatest coaches of this or any other era, Fritz Crisler kissed the Saturday madness goodbye last year, leaving behind a record of staggering proportions. In 18 years of head coaching at Minnesota, Princeton, and Michigan, he won 116 games and lost only 32.

A tremendous organizer, precisionist, and inventive genius, Fritz has always been plagued to write an up-to-date book on the game—and here it is.

*Modern Football* is an authoritative, detailed guide to better coaching and playing technique. The first half of the book is devoted to an exhaustive study of such fundamental arts as blocking, offensive line play, kicking, running, passing, signal systems, formations and plays, tackling and defensive line play.

All the techniques are analyzed in painstaking detail, following which Crisler explains the workings of the basic formations and suggests and analyzes the defense for each. Defenses are given for the running, passing, and kicking games, as well as for the T formation.

Particularly valuable are several chapters on organization. Crisler explains how to arrange the schedule, set up the pre-season preparation, organize a coaching staff, insure proper condition, etc.

The organization of practice is covered in wonderful fashion. Crisler gives a complete day-by-day, hour-by-hour practice schedule for the entire season! The book is rounded out with valuable sections on game-day organization, strategy, and coaching problems.

This mass of technical information is supplemented with 72 fully and sharply drawn diagrams and 24 action photographs.

It is a swell book, ideal for beginning coaches.

**(See adv. on page 64)**

- MANUAL FOR ATHLETES (Fundamentals in Sports). By Edward F. and Carl D. Voltmer. Pp. 215. Illustrated—diagrams. St. Louis: C. V. Mosby Co. \$3.

INTENDED for the use of athletes, prospective coaches in training, and coaches now on the job, this book offers a neat technical analysis of the skills of 12 popular school sports—football, basketball, baseball, softball, track and field, badminton, volleyball, golf, handball, tennis, swimming, and wrestling.

In addition to this technical analy-

sis, the book delves into the physiological and sociological aspects of exercise, covering such vital areas as diet, sleep and rest, medical care, excesses, sex, spirit, social attitudes, leadership, and self-control.

Written by two outstanding college educators, the book is soundly organized and clearly written, and should prove extremely useful in building a safe and sane athletic program.

- THE NEW RUNNING SCORE METHOD FOR BASKETBALL (Score Book). Little Falls, N. Y.: Mohawk Valley Sports, Inc. \$2.50 and \$1.50.

HERE'S a new, ingenious, highly practical type of basketball scorebook which will enable you to keep a complete individual and team record of your offense.

Heretofore, the attention of most scorebooks has been focused on the individual player. This book still stresses the individual by recording his attempted baskets and fouls, percentages made, time played, and fouls against him. But now for the first time, attention is concentrated on what really counts, namely, team play—how each combination of five players work together.

The scorebook enables you to keep, easily and accurately, the following play-by-play picture of the game:

1. Every combination of players used in the game, how long that combination played, how many points it made and how many points were scored against it.

2. Time played and points made by each individual in each combination in which he played, total time he played in the game, total basket attempts, percentage of shots and fouls made.

3. Strategy used by both coaches, every offensive move by both teams.

Complete instructions for recording this data are given in the book, and they are simple enough to enable your scorer to learn this system in a single game.

The book comes in two types. The type book described above (for coaches) sells for \$2.50 plus 15¢ for postage and insurance. For club use, a second type is available which contains only the box score and the running score, not the combination, player, and official statistics. This type sells for \$1.50 (plus 15¢).

**(See adv. on this page)**

- GREAT AMERICAN SPORTS HUMOR. By Mac Davis. Pp. 244. Illustrated—cartoon drawings. New York: The Dial Press, Inc. \$2.50.

THIS unquestionably is the finest and most exhaustive collection of humorous sports anecdotes ever put between two covers.

The author, a member of Bill Stern's vast stable of ghostwriters, has done a swell job of collecting. The stories cover practically every sport and are impeccably narrated. While some of them have appeared in our *Coaches' Corner* down through the years, most of them are completely new.

Coaches called upon for after-dinner speech stints will find this book a real blue-plate special.

- **FUNCTIONAL FOOTBALL (Third Edition).** By John Da Grosa. Pp. 340. Illustrated—photographs and diagrams. New York: A. S. Barnes & Co. \$4.

A SPORTSHELF "must" since 1936, *Functional Football* remains one of the solid staples in the technical football text line.

For his third edition, the mighty Ox has incorporated a complete chapter on the T formation, replete with nearly 60 diagrams. He analyzes the strength and weakness of the T, its fundamental construction, basic plays, and defenses against it. Like the rest of the text, all this material is clearly and soundly projected, and a boon to both the experienced and beginner coach.

The main body of the book remains virtually untouched, as well it should be since Ox said it all the first time. Coaches will find a thorough analysis of every individual technique, both on offense and defense, as well as a beautiful exposition of all the possibilities in the way of offensive and defensive team play, strategy, and teaching programs.

Ox covers all this ground in six broad sections: Offensive Fundamentals (four chapters), Defensive Fundamentals (two chapters), Team Offense, Team Defense, Coaching Responsibility, and Modern T Formation With Man in Motion (Offense and Defense). A rich selection of photos and diagrams supplement the text at all the key points of the analyses.

Eschewing pet theories or methods, Ox stresses the fact that the style of play should be fitted to the available material, and shows how original plays may be developed to suit individual needs.

- **ATHLETIC MEMORY BOOK.** Prepared by Wesley Lauritsen. Pp. 60. Faribault, Minn.: Wesley Lauritsen. \$1.

THIS book is designed principally for students interested in preserving the memory of their school teams and records.

It provides space to record all the athletes' and coaches' names, schedule of games, scores, etc. In addition, there are blank pages on which to paste photos and clippings, and to write in the school yells or make any other notations. Each sport has its own section, and there is more than enough room for all the sports on the school program.

The *Athletic Memory Book* is a nice idea and should make an unusual Xmas gift or banquet souvenir.



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Nevertheless it can be done: Any school with its own quarter-mile track can easily improvise a good fall track program. Berkeley High School has just completed its tenth year of fall intramural track, and feels that its program fulfills an urgent need.

Our program is built around four objectives:

1. To train and build up the boys for spring track.
2. To teach the proper fundamentals of running.
3. To create an incentive for higher competitive accomplishments.
4. To give the coach an opportunity to survey his material and prepare the boys for the events in which they are most likely to succeed.

With these objectives in mind, we try to make our learning situation as interesting and effective as possible. This is done by incorporating competition in at least two workouts each week—on Tuesdays and Thursdays.

On Mondays and Wednesdays, our instruction centers around the inculcation of correct form. Instruction is given on the following fundamentals: (1) the crouch start; (2) striding with a good forward lean; (3) proper arm and leg action; (4) running on the toes, with the feet pointing straight ahead; (5) traction running with proper relaxation of the diaphragm; and (6) place running.

We have several of the more experienced boys demonstrate the fundamentals, while the others observe. This produces quick results and helps incentivize the beginners.

On Tuesdays and Thursdays, practice starts with a jog around

	After	Amber	Aquila	Bilman	Blair	Bradsher	Carr	De Witt	Garrett	Green	Hart	Humphrey
Attendance 1st week	4	3	4	3	2	4	4	4	4	4	4	2
Attendance 2nd week	4	4	3	4	4	4	4	4	3	4	3	4
660-yard relay	5	10	6	7	8	4	10	8	4	10	4	10
880-yard relay	8	4	7	6	5	10	10	8	10	10	4	10
Attendance 3rd week	4	4	3	4	4	4	4	4	3	4	4	4
1320-yard relay	10	7	4	0	6	4	8	10	5	10	8	6
1540-yard relay	7	8	5	0	10	7	6	8	10	10	6	4
Attendance 4th week	4	3	4	0	4	3	4	4	4	4	3	4
1 1/4 mile relay	5	4	4	7	0	5	10	8	10	5	10	8
1 1/2 mile relay	4	6	10	6	0	5	10	8	7	8	7	8
Attendance 5th week	3	4	4	4	0	3	4	4	4	3	4	4
1 1/2 mile relay	10	5	7	10	0	8	8	6	5	10	10	7
2 mile relay	10	10	8	7	0	7	10	4	5	6	5	7
Attendance 6th week	4	4	3	3	3	3	4	3	4	3	4	3
2 1/4 mile relay	8	5	6	8	10	6	10	7	5	6	8	8
2 1/2 mile relay	4	8	6	4	5	7	6	7	10	5	10	10
Attendance 7th week	4	4	3	4	4	4	4	4	4	3	4	3
2 1/2 mile relay	7	7	4	7	4	10	10	5	10	8	8	8
4 1/2 mile relay	10	6	10	8	7	4	5	6	8	8	4	4
Attendance 8th week	4	4	4	4	3	4	4	4	4	4	4	4
Total points	119	110	105	96	—	104	129	122	111	131	111	114
Letter awards	—	—	—	—	—	—	—	—	—	—	—	—

the track followed by 10 minutes of body-building exercises. The squad is then split up into four or six teams of six boys each. We select the outstanding boys for captains and they in turn choose for teams.

This is observed every day of competition and works out much better than having the same teams for the entire season.

A card system is used for entering the names of the boys on each team. The races are run as relays. If six teams compete, every boy on the winning team receives 10 points. Other points are awarded as follows: 8 for second place, 7 for third place, 6 for fourth, 5 for fifth, and 4 for sixth.

In addition to the points earned in competition, the boys are awarded points for attendance—1 point for each day of attendance.

At the close of the season, 10 small intramural block letter awards are presented to the boys with the largest number of points.

A chart (shown on this page) is posted on the athletic bulletin board, and the points earned each week are recorded under the boys' names. This develops interest, for it is an impartial method of scoring, and also spurs the boys to greater effort.

Due to football games being played on Fridays, our schedule covers just four days a week over a two-month period. The competitive relays are started at short distances and are subsequently lengthened. Following is the schedule we have found to be most satisfactory:

**First-Second Week**  
Practice.

**Third Week**

Monday—practice.  
Tuesday—660-yd. relay, each boy running 110 yds.  
Wednesday—practice.  
Thursday—880 relay, two boys running 220, other four 110.

**Fourth Week**

Monday—practice.  
Tuesday—1320-yd. relay, each boy running 220.  
Wednesday—practice.  
Thursday—1540-yd. relay, two boys running 110, two 220, two 440.

**Fifth Week**

Monday—practice.  
Tuesday—1 1/4 mile relay, two boys running 220, four 440.  
Wednesday—practice.  
Thursday—1 1/2 mile relay, each boy running 440.

**Sixth Week**

Monday—practice.  
Tuesday—1 1/2 mile relay, two boys running 220, two 440, two 660.

(Concluded on next page)

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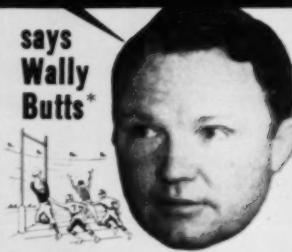
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Wednesday—practice.

Thursday—2 mile practice, two boys running 440, four 660.

### Seventh Week

Monday—practice.

Tuesday—2 1/4 mile relay, two boys running 440, two 660, two 880.

Wednesday—2 3/4 mile relay, two boys running 660, four 880.

Thursday—3 mile relay, each boy running 1/2 mile.

### Eighth Week

Monday—practice.

Tuesday—3 1/2 mile relay, four boys running 880, two 1320.

Wednesday—practice.

Thursday—4 1/2 mile relay, two boys running 880, two 1320, two 1 mile.

## Coaches' Corner

(Continued from page 59)

produced west of the Mississippi.

I do not propose anything so trifling as an intercoach eating contest between the halves of the game. It takes Coach Owen and Coach Hickman twenty minutes to roll up their sleeves, summon their caddies, and select their cutlery for the opening course. Before they had killed their first barrel of oysters, the teams would be back on the field, punting and passing and spilling the horse-radish and generally fouling things up. What we need here is a species of twi-night double-header—Owen vs. Hickman, table stakes, from 4 p.m. to 8:30, football thereafter.

**Talking about** looking and moving like a ball player brings to mind Gary Cooper's gauche performance in *Pride of the Yankees*. Gary could not learn to throw left-handed convincingly. So he was put on third base with a first baseman's mitt and then the film was reversed to make him look like a left-handed first baseman.

Babe Herman was working in the picture and caused a lot of retakes under that arrangement. He was supposed to make a hit and run to third. But instincts of a lifetime proved too strong, and time after time he would hit and run to first. That, evidently, was the only thing Babe ever did get straight in his baseball career.

**The game between** Notre Dame and Southern Methodist had hardly gotten under way when Notre Dame scored a touchdown. A spectator cheered wildly, threw his hat into the air and pounded his neighbor on the back. A few minutes later when S.M.U. scored, he was equally jubilant. This aroused the curiosity of his neighbor, who asked, "Which team are you rooting for, my friend?"

"I don't care which team wins," was the reply. "I just came to enjoy the game."

"Oh," the questioner sneered, "an atheist."

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DEAN CROMWELL, Ex-Track Coach  
UNIVERSITY OF SO. CALIFORNIA

THOMAS K. CURETON, Professor  
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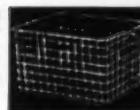
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COLUMBIA UNIVERSITY

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### ALL-AMERICAN

#### SCOREBOARDS (50)

Circulars on Scoreboards  
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#### ALLISON MFG. (57)

Information on Athletic  
Field Markers

#### AMERICAN COACHES

#### SUPPLY (68)

Information on Magic  
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#### AMERICAN HAIR & FELT (57)

Information on Ozite  
Gym Mat Felt

#### AMERICAN WIRE (71)

Folder on Locker Baskets  
and Uniform Hanger

#### AWARD INCENTIVES (60)

Catalog of Trophies,  
Medals, Charms, Plaques,  
Emblems

#### BECTON, DICKINSON (31)

Ace Manual for Prevention  
and Treatment of  
Athletic Injuries

#### BIKE WEB (27)

Catalog  
 Coaches and Trainers  
Handbook

#### BROOKS SHOE (33)

Catalog on Athletic  
Footwear

#### BUTWIN SPORTSWEAR (56)

Information on Sports  
Jackets, Sideline Parkas,  
Basketball Warm-Up Suits

Name of Nearest Dealer

#### CASTELLO FENCING (42)

Catalog  
 Information on How to  
Form, Equip, Train, and  
Schedule a Team

#### CEDAR KRAFT (72)

Information on Electric  
Scoreboards and Foot-  
ball Down Indicator

#### H. & R. MFG. (59)

Booklet on Dry Line  
Markers

#### HAND KNIT HOSIERY (24)

Information on Shrinking  
Treated Athletic Socks

#### CHAMPION KNITWEAR (61)

Catalog of Game Jerseys,  
Practice Jerseys, T Shirts,  
Sax, Supporters, Sweat  
Shirts, Phys. Ed. Uniforms

#### CHEM PRODUCTS (70)

Information on Cinch  
Sure-Grip Hand Preparation

#### CONVERSE RUBBER (23)

Catalog on Basketball  
Footwear  
 Basketball Yearbook

#### CORTLAND LINE (45)

Booklet, "Beginner's  
Badminton"  
How many

#### CROUSE-HINDS (29)

Bulletins for Lighting of  
Sports Fields

#### DANIELS, C. R. (19)

Catalog of Dandus Foot-  
ball Equipment

#### DUCOMMUN CO., M. (60)

Catalog of Stopwatch

#### EAGLE METALART (68)

Catalog of Trophies,  
Medals, Emblems

#### E-Z WALK (72)

Sample, Rubber Insole

#### FARCO CO. (68)

Circular on Steam Bath  
Cabinets

#### GENERAL ELECTRIC (39)

Standard Plans for light-  
ing of Sports Fields

#### GENERAL SPORTCRAFT (2)

Rules Booklets for Bad-  
minton, Deck Tennis,  
Shuffleboard, Table  
Tennis, Bat Tennis

#### H. & R. MFG. (59)

Booklet on Dry Line  
Markers

#### LEAVITT CORP. (63)

Information on Bleachers  
and Grandstands

#### HILLIARD SALES (51)

Book, "Job Specifications  
on Floor Treatment and  
Maintenance"

#### HOOD RUBBER (41)

Booklet, "Basketball  
Hints," by Ozzie Cowles  
 Foul Shooting Record  
Charts

#### HORN BROS. (25)

Booklet, "Modern School  
Plans"  
 Details on the "3 in 1  
Horn Gym Plan"

#### HOUSE OF HARTER (69)

Information on Football  
Shoe Cleats

#### HUSSEY MFG. (49)

Catalog on Steel Portable  
Bleachers and Grand-  
stands

#### IMPEXTRA (70)

Information on Precision  
Timer

#### JEST-ART ORIGINALS (63)

Information on Souvenir  
Statuettes

#### ARTHUR KAHN (67)

Addresses of Nearest  
Uniform Makers

#### KANDEL KNITTING (64)

Information on Letterman  
Sweaters

#### KAYART PLASTIC (64)

Information on Plexiglas  
Eyeglass Protector

#### KERRIGAN IRON (67)

Catalog on Permanent  
Steel Grandstands

#### LAYBURN CO. (68)

Information on Gym and  
Playground Apparatus,  
Portable Bleachers,  
Electric Scoreboards

SEE PAGE 72 FOR OTHER LISTINGS AND FORM FOR SIGNATURE

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- Strong, lightweight, easy to handle.
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- Information on Knee Corrector

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- Information on Flame-proof Stage Curtains, Canvas Enclosures, Wrestling Mats, Ring Covers, Flags

### MARBA, INC. (46)

- Information on Athletic Equipment Reconditioning

### MASTER LOCK (53)

- Information on Key-Controlled Combination Lock

### FRED MEDART (36-7)

- Book, "Physical Training Practical Suggestions for the Instructor"

- Catalog on Telescopic Gym Seats, Steel Lockers

- Information, Acromat-Trampolin

- Catalog on Basketball Backstops, Scoreboards

### MISHAWAKA RUBBER

(Inside Back Cover)

- Basketball Shoe Booklet

### MOHAWK VALLEY SPTS. (66)

- Information on Ultra Modern Basketball Scorebook

### MUTUAL LIFE (18)

- Booklet, "The Career for Me"

### NADEN & SONS (62)

- Catalog on Electric Scoreboards and Timers

### NATIONAL SPORTS (61)

- Catalogs: Bases, Mats, Rings, Training Bags, Wall Pads, Pad Covers

### NELSON CO. (57)

- Information on Football Permanent Game Record

### NAME

(Principal, coach, athletic director, physical director)

### SCHOOL

### ENROLLMENT

### CITY

No coupon honored unless position is stated

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(See page 71 for other listings)

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on which advertisement may be found)

### NISSEN TRAMPOLINE (52)

- Literature
- Booklet, "Tips on Trampolining"

### NURRE COS. (34)

- Information on Plate Gloss Basketball Banks

### O-C MFG. (51)

- Information on V-Front Apex Supporters

### OCEAN POOL (59)

- Information on Trunks, Swim Fins, Kicka Boards, Nose Clips, Caps, Klogs

### OHIO-KENTUCKY MFG. (55)

- Catalog on Complete Line of Balls, Gloves, and Striking Bags

### O'SHEA KNITTING (49)

- Catalog on Custom-Built Basketball Uniforms, Jerseys, Warm-Ups

### PENNA. SALT (17)

- Literature on Perchloron for Pool Sanitization

### PROFESSIONAL APPLIANCE (59)

- Information on Pro-Belt Sacro-Iliac Support

### RAWLINGS MFG. (3)

- Catalog

### RED FOX MFG. (45)

- Catalog on Basketball Equipment

### REGAL AWARDS (65)

- Catalog on Line of Low Priced Personalized Sport Oscars

### REVERE ELECTRIC (62)

- Sports Floodlighting Bulletin
- Catalog

### RIDDLE, JOHN T. (21)

- Information on Suspension Helmets, Shoes, Balls, Track Supplies

### SEAMLESS RUBBER

- (Inside Front Cover)
- Catalog on Kolite Basketballs, Footballs, Soccer Balls

### SHADOGRAF MFG. (68)

- Catalog on New Electric Scoreboards

### SMITH & WAITE (64)

- Information on Knee and Ankle Braces

### SOLIN SPTG. GOODS (64)

- Information on Selling Offer

### SPALDING & BROS. (1)

- Catalog
- Sports Show Book

### SPAULDING KNITTING (65, 69)

- Information on Honor Sweaters

### STETSON KNITTING (70)

- Information on Letter Award Sweaters

### STEWART IRON (30)

- Information on Fences and Metal Specialties

### TAYLOR'S, ALEX (71)

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### VOIT RUBBER (4)

- Catalog on Rubber Coated Ball and Equipment

### WILSON SPORTING (6)

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### POSITION

(Principal, coach, athletic director, physical director)

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October, 1949

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ON THE SOLE

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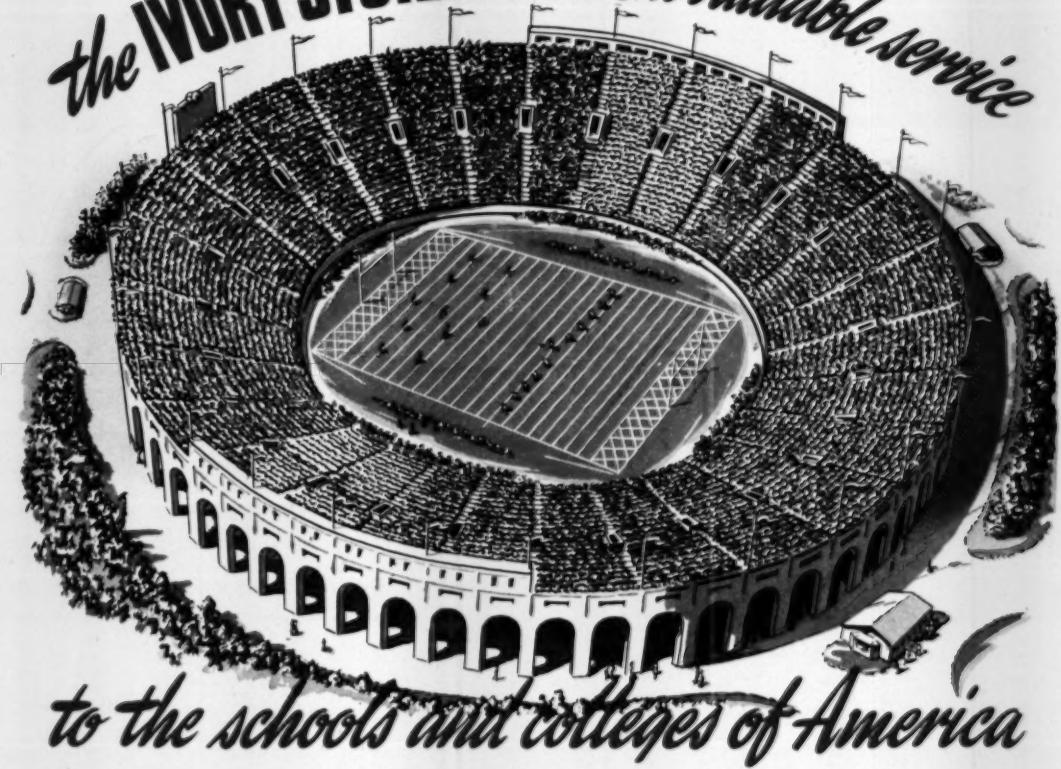
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